Synology®

Synology DiskStation User's Guide

Based on DSM 4.0

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Chapter 1

Introduction

Congratulations on your purchase of Synology DiskStation. Synology DiskStation is a multi-functional Network-Attached Storage server, serving as a file-sharing center within your Intranet. Moreover, it is specially designed for a variety of purpose, allowing you to perform the following tasks with the web-based Synology DiskStation Manager (DSM):

Store and Share Files over the Internet

Windows users, Mac users, and Linux users can easily share files within the Intranet or through the Internet. Unicode language support makes sharing files in different languages from Synology DiskStation simple.

Manage Files with Web-Based File Station

One of Synology DiskStation Manager's applications, File Station, can make it possible for users to manage their files on Synology DiskStation easily through a web interface. You can also access the files stored on Synology DiskStation with a mobile device.

Transfer Files via FTP

Synology DiskStation provides FTP service with bandwidth restriction and anonymous login. To transfer data safely, FTP over SSL/TLS and uninvited IP auto-block are also available.

Sync Files with Cloud Station

Cloud Station is a file sharing service that allows your DiskStation to become a file sync center to sync files between multiple client computers. With the Cloud Station application installed on your computers, you can simply drop your office file to a folder on your office computer, and then open the same file automatically synced to your laptop.

Share Storage Capacity as iSCSI LUNs

You can designate portion of your Synology DiskStation volume space to be an iSCSI LUN, which will allow the iSCSI initiator to access the space like a local disk.

Back Up Files on Computer and Server

Synology DiskStation provides various backup solutions to back up computer data to Synology DiskStation, back up Synology DiskStation data or iSCSI LUN to an external hard drive, another Synology DiskStation, an rsync-compatible server, Amazon S3 server, HiDrive backup server, etc.

Enjoy Entertainment Content on the Server

Download Station allows you to download files from the Internet through BT, FTP, HTTP, eMule and NZB to Synology DiskStation. The Media Server and iTunes support allows computers or DMA devices within LAN to playback multimedia files on Synology DiskStation[1].

With the USBCopy or SDCopy function, you can press the Copy button on your DiskStation to instantly copy files from a camera or SD card to Synology DiskStation.[2]

Share Photos, Videos, and Blogs with Photo Station

Photo Station gives you the freedom to share photos and videos over the Internet without complicated upload steps. Album control ensures the content is shared with the right persons. Visitors can leave comments for your

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[1] For recommended peripheral models, including hard drive, USB printer, DMA, and UPS, please visit **www.synology.com**.
[2] USBCopy or SDCopy is supported on specific models only. Visit **www.synology.com** for more information.

photos. Furthermore, a brand new blogging system is integrated for you to easily share your life and thoughts over the Internet.

Enjoy Music Anytime and Anywhere

Audio Station allows you to listen to music stored on the Synology DiskStation, from a connected iPod, or even stream Internet Radio stations. In addition, you can stream music from the Synology DiskStation with a web browser over the Internet.

Host Websites

The Virtual Host feature allows you to host up to 30 websites using Web Station, with PHP and MySQL supported.

Record Videos with IP Cameras

Surveillance Station allows you to manage, view, and record videos from multiple IP cameras over the network. By accessing the web-based management interface of Surveillance Station, you can watch the real-time image the camera is monitoring, and record videos continuously, in motion-detection mode, or in alarm-recording mode.

Discover More Apps with Package Center

Package Center brings intuitiveness and convenience for users to easily install and update a variety of applications (which are packed into packages). Just browse all available applications and select the ones that best suit your needs. All can be done with just a few clicks.

USB Print Server

USB printers connected to your DiskStation can be shared by client computers over the local area network. AirPrint support allows you to print to the printer from an iOS device, while Google Cloud Print support allows you to print to the printer when you are using Google products and services.[1]

Online Resources

Click on the links to obtain Synology's online resources.

- **FAQ:** www.synology.com/support/faq.php
- **Wiki:** forum.synology.com/wiki
- **Forum:** forum.synology.com
- **Download Center:** www.synology.com/support/download.php
- **Technical Support:** www.synology.com/support/support_form.php

[1] For recommended peripheral models, including hard drive, USB printer, DMA, and UPS, please visit www.synology.com.

Chapter 2

Get Started with Synology DiskStation Manager

This chapter explains how to log in to Synology DiskStation's web-based management UI, **Synology DiskStation Manager (DSM)**, customize your own desktop, manage its taskbar and widgets, and use the **Main Menu** to access DSM settings and applications.

Install Synology DiskStation

For more information about setting up Synology DiskStation and installing DSM, see the **Quick Installation Guide** that came with your installation disc.

Log in to Synology DiskStation Manager

You can log in to DSM with Synology Assistant or with a web browser.

Use Synology Assistant

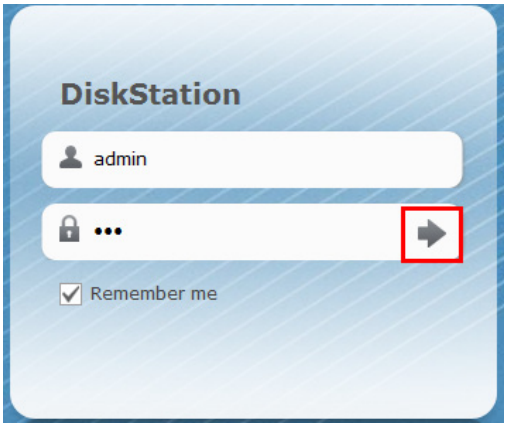
Windows User:

1 Insert the installation disc into your computer, and click **Start**. Follow the onscreen instructions to complete the setup process.

2 Synology Assistant will be installed and launched on your computer.

3 Choose the server you want to manage. Click **Connect** or double-click the selected server to go to DSM's login screen.

4 Enter your user name and password, and click **Login**. The default password for **admin** is empty. If you want to save your login information and log in automatically next time, tick **Remember me** before logging in.



Mac OS X User:

1 Insert the installation disc into your computer, and then double-click the **SynologyInstall** icon on the desktop.

2 In the window that appears, double-click the **MacOSX** folder, and then double-click **Synology Assistant-[number].dmg**.

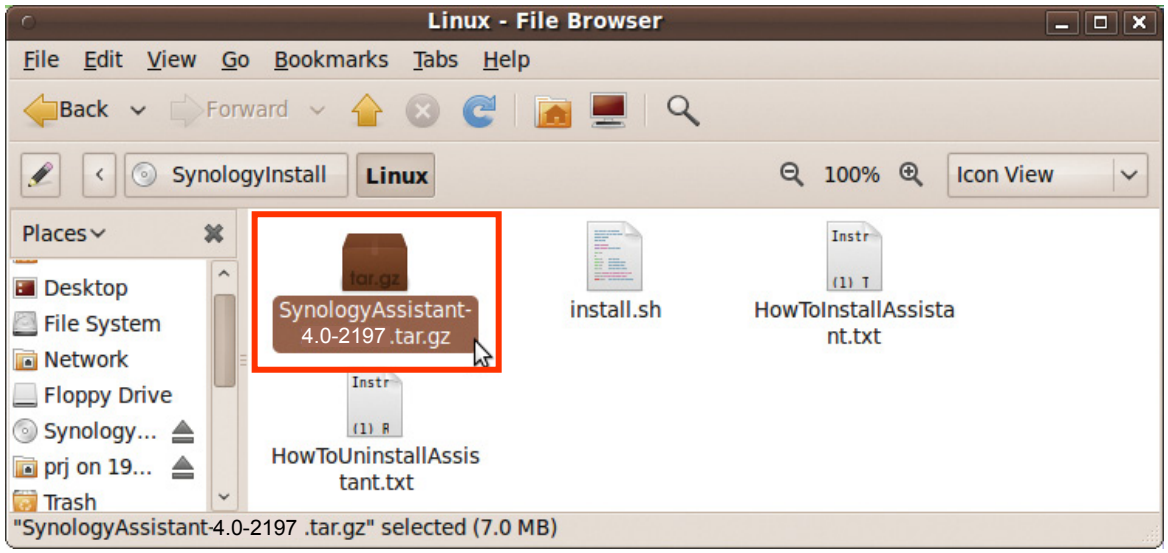
3 Double-click the **Synology Assistant.app** in the window that appears.

4 Follow step 3 to 4 of the “Windows User” section to log in to DSM.

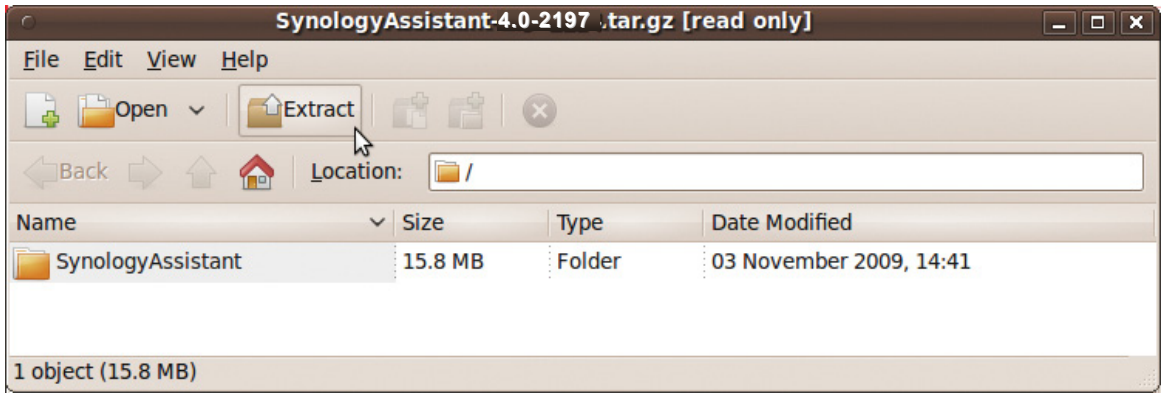
Linux (Ubuntu) User:

1 Insert the installation disc into your computer, and then double-click the **SynologyInstall** icon on the desktop.

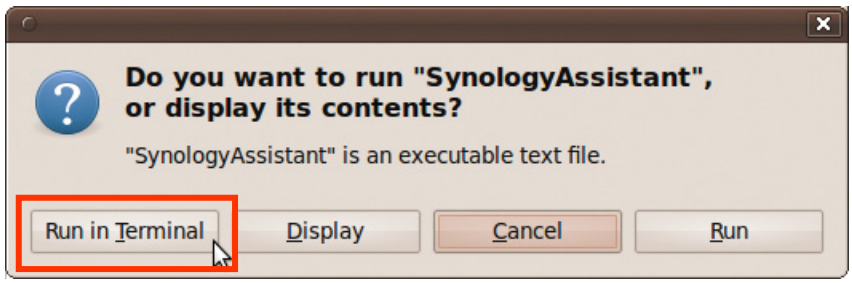
2 In the **File Browser** window that appears, double-click the Linux folder, and then double-click **Synology Assistant-[number].tar.gz**.



3 Click **Extract**, and then extract the **SynologyAssistant** directory to the path **/usr/local** or any other path.



4 Go to the path **/usr/local/SynologyAssistant** (or **[the path you just specified]/SynologyAssistant**), double-click **SynologyAssistant**, and then select **Run in Terminal** in the dialog box that appears.



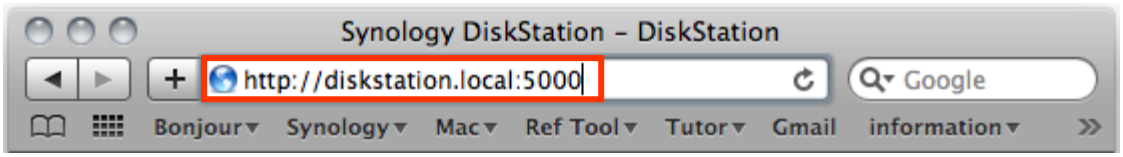
5 Follow step 3 to 4 of the “Windows User” section to log in to DSM.

Use a Web Browser

1 Open a web browser window, enter any of the following in the address field, and then press Enter on your keyboard:

- **http://Synology_Server_IP:5000**
- **http://Synology_Server_Name:5000/** (or **http://Synology_Server_Name.local:5000/** on a Mac)

Synology_Server_Name should be replaced with the name you set up for Synology DiskStation during the setup process. If you choose **One-step Setup** during the setup process, the **Synology_Server_Name** will be **DiskStation**, **CubeStation**, **USBStation**, or **RackStation**.



2 Enter your user name and password, and click **Login**. The default password for **admin** is empty. If you want to save your login information and log in automatically next time, tick **Remember me** before logging in.

Note: To ensure your connection to DSM runs smoothly, please use the following browsers.

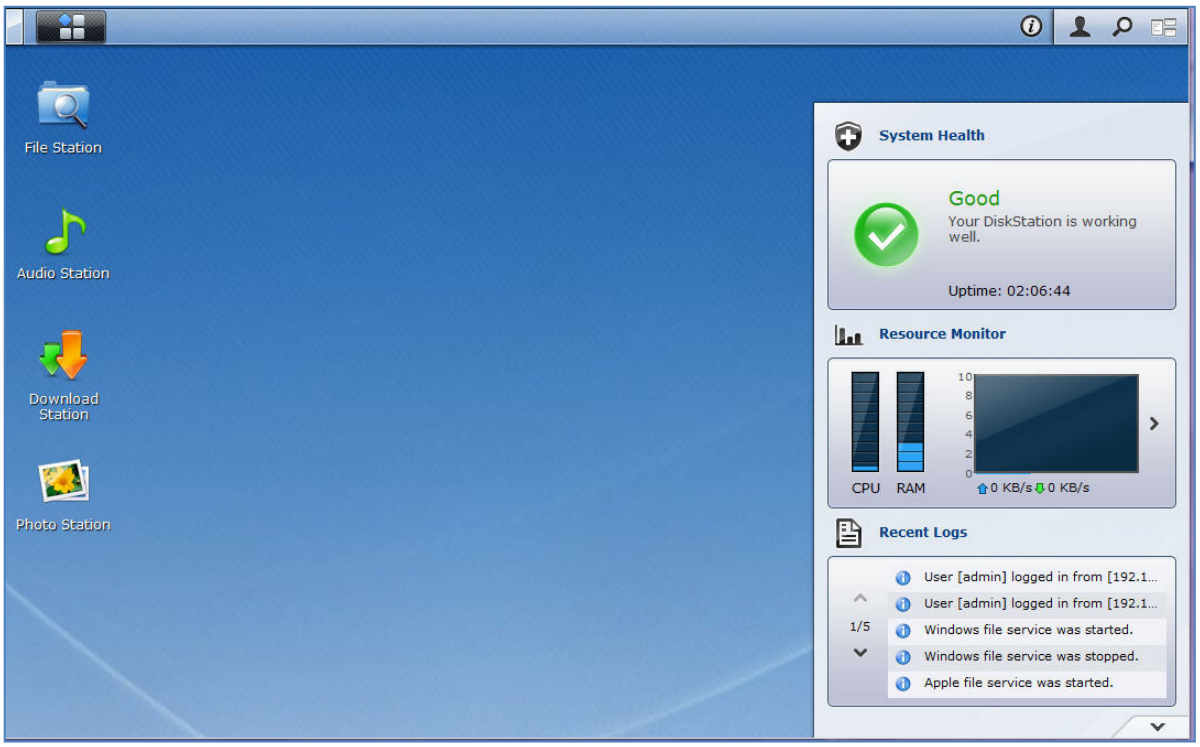
- **Chrome**
- **Firefox:** 3.6 or later
- **Safari:** 5.0 or later
- **Internet Explorer:** 8.0 or later

DiskStation Manager Appearance

When you log in to Synology DiskStation Manager (DSM), you can see the desktop, taskbar and widgets.

Desktop and Shortcuts

The desktop is where your application windows are displayed. You can also create desktop shortcuts to frequently used applications.



To create a desktop shortcut to an application:

Drag its thumbnail from the **Main Menu** to the desktop.

To remove a desktop shortcut to an application:

Right-click the shortcut and choose **Remove shortcut**.

To open Synology-designed or third-party applications (available at Package Center) in a new browser window:

Right-click the applications' **Main Menu** thumbnail or desktop shortcut and choose **Open in New Window**.

> ***Note:*** You can also customize your desktop background color or wallpaper with the **Desktop** function. See "Desktop" on Page 14 for more information.

Taskbar

The taskbar at the top of the desktop contains the following functions:

1 **The Show Desktop button:** Click to clear your application windows and reveal the desktop. Click again to bring the windows back to the desktop. For more information about application windows, see "Open Application Windows" on Page 13.

2 **The Main Menu button:** Click to reveal the **Main Menu**. See "Manage DSM with the Main Menu" on Page 12 for more information.

3 **The icons of open applications:**

- Click the icon of an application to show or hide its window on the desktop.
- Right-click the icon and choose from the shortcut menu to manage the application window (**Maximize**, **Minimize**, **Restore**, **Close**) or its taskbar icon (**Pin to Taskbar**, **Unpin from Taskbar**).

4 **The Notifications button (with an exclamation mark):** Click to check the logs of important events.

- **Clear All**: Click to remove all events and hide the **Notification** button.
- **Show All**: Click to see all notifications in another window.
- **(Number) unread**: If there are more than 30 unread notifications, **(Number) unread** will appear instead of **Show All** to notify you of how many notifications have not been read. Click to see all notifications in another window.

> ***Note:*** For more information about system log, see "Log" on Page 148.

5 **The Options menu:** Click to manage your user account settings or leave DSM.

- **Options**: Click to manage personal options for your DSM users. See “Manage Personal Options” on Page 14 for more information.
- **Logout**: Click to exit your current account and return to login screen.

6 **The Search icon:** Click to enter keywords in the search field to quickly find a list of relevant applications and **DSM Help** articles.

7 **The Pilot View button:** Click to have an instant preview of all open applications and hover your mouse over the application windows for quick navigation.

> ***Note:*** **Pilot View** is not supported by Internet Explorer.

Widgets

The widgets at the bottom-right corner of the desktop contain the system information of your Synology DiskStation.

To open/close the widget panel:

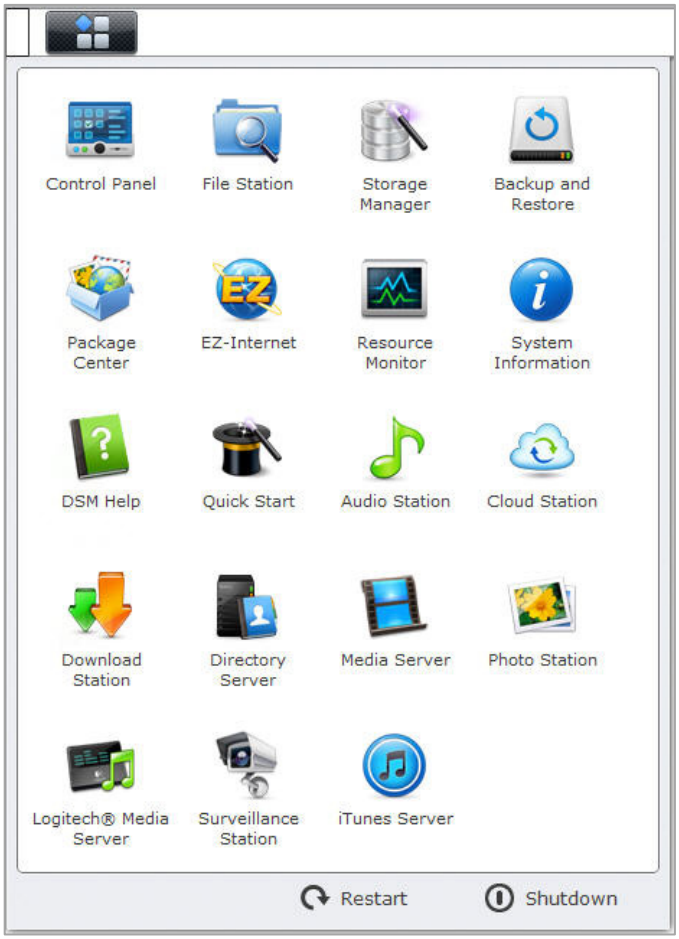
Click the upward/downward triangle to reveal/close the panel.

You can choose any three of the following subject to be displayed on the widget panel. More information can be acquired by clicking the icon at the top-left corner of each corresponding subject panel.

- **Current Connections**: See a list of users who are currently accessing DiskStation resources.
- **File Change Log**: View the file change log records of DiskStation services.
  - **No active logs**: Appears when none of the logs (Samba, WebDAV, FTP, File Station) is enabled.
  - **No logs available**: Appears when any one of the logs (Samba, WebDAV, FTP, File Station) is enabled.
- **Recent Logs**: View the log records of DiskStation services.
- **Resource Monitor**: Monitor the CPU usage, memory usage, and network flow.
- **Scheduled Backup**: View the status of your backup tasks.
- **Storage**: View your DiskStation's volume usage and disk status.
- **System Health**: Obtain an overall status of your DiskStation and all connected devices (if any). You will be advised to take corrective action when system error occurs.

Manage DSM with the Main Menu

The **Main Menu** is where you can find all the applications and settings provided by Synology DiskStation Manager.



Restart and Shutdown

Click **Restart** or **Shutdown** at the bottom-right corner of the **Main Menu** to restart DiskStation or turn it off, just like using any other operating systems.

Reorder Main Menu's Thumbnails

Open **Main Menu** and drag any thumbnail to any position you want.

Open Application Windows

In addition to the **Control Panel**, the **Main Menu** contains the thumbnails of all the other DSM applications. With DSM's multitasking ability, now you can open multiple application windows at the same time.

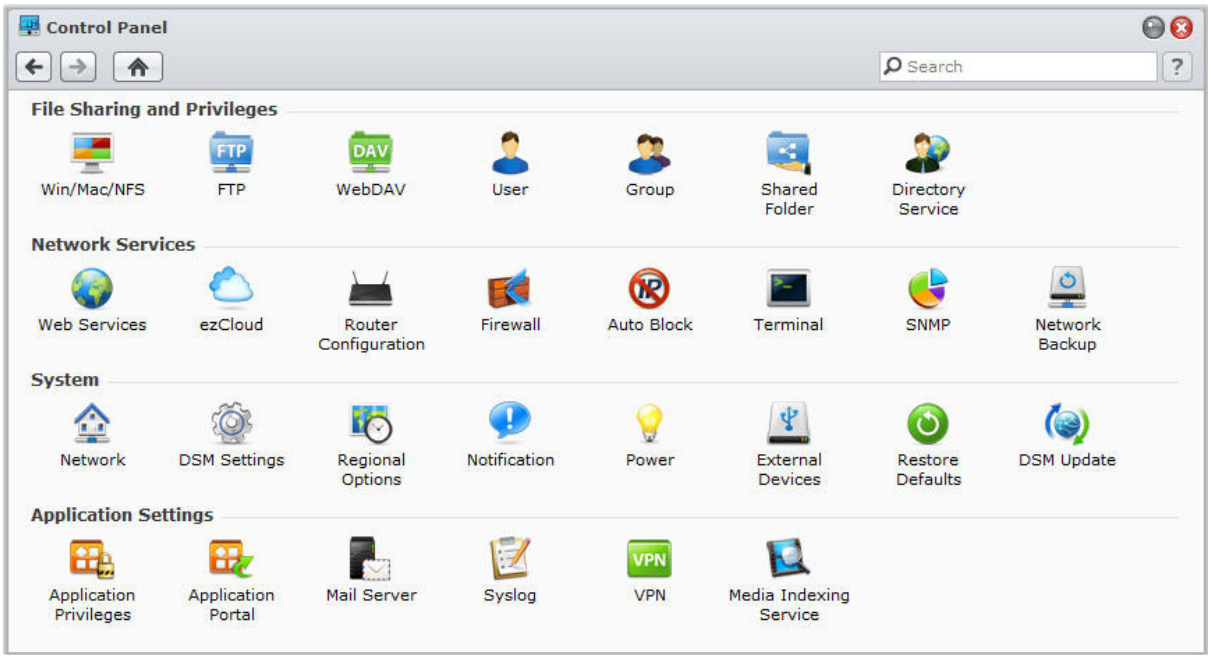
To open an application window:

Click any thumbnail of an application from the **Main Menu** to open the application window on the desktop and the application icon on the taskbar.

> ***Note:*** You can also open application windows through desktop shortcuts. See "Desktop and Shortcuts" on Page 10 for more information.

Use the Control Panel

Choose **Control Panel** from the **Main menu** to see the thumbnails of DSM settings.



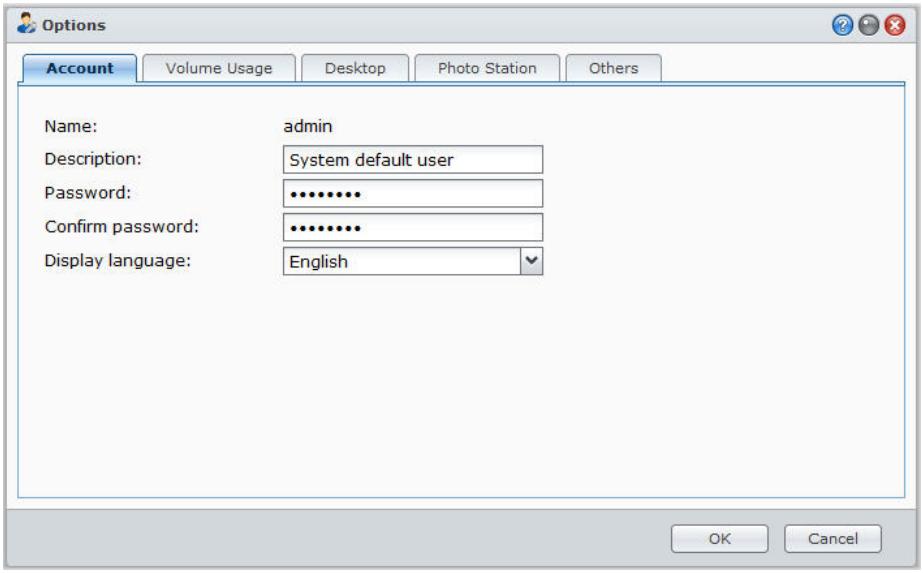
The DSM settings on the Control Panel are grouped into the following categories:

- **File Sharing and Privileges**: Set up Win/Mac/NFS/FTP/WebDAV file sharing service.
- **Network Services**: Manage and edit the settings for network services and Internet connection.
- **System**: Edit the basic settings on your DiskStation.
- **Application Settings**: Assign application privileges for user accounts, enable the services of built-in applications, create a VPN connection, and index multimedia files stored on your DiskStation for applications.

> ***Note:*** Control Panel is accessible only to **admin** or users belonging to the **administrators** group. See "Create and Edit Groups" on Page 56 for more information.

Manage Personal Options

Click the **Options** menu (with a figure icon) at the top-right corner of your DSM desktop to manage your user account settings or log out of DSM.



Account

Under **Account**, you can change your account's password and description.

To modify your account:

1 Enter a description for your account (optional).

2 If you want to change your account's password, enter the new one and confirm it.

3 Enter your email address (optional).

4 Change your display language according to your preferences. The language you specified here for your account will have higher priority over the one specified at **Main Menu** > **Control Panel** > **Regional Options**.

5 Click **OK**.

Limitations:

- The user description is case sensitive and can be 0 to 64 displayable Unicode characters.
- The password is case sensitive and should be 0 to 127 displayable characters, including letters, numbers, signs, and space.

Volume Usage

Under **Volume Usage**, you can view your quota on all DiskStation volumes set by **admin**, as well as the amount of capacity you have used on each volume.

Desktop

Under **Desktop**, you can customize the appearance of your desktop.

To change the background and text color of your desktop:

1 Tick **Customize color** and then choose from the drop-down menus to change the text color of desktop thumbnails and the background color of DSM desktop.

2 Click **OK**.

To upload a customized image that will be used as your desktop wallpaper:

1 Tick **Customize background**, and then do any of the following to select your background image:

- If you want to use an image stored on your DiskStation, click **Select image** to select the image, and then click **Select**.
- If you want to use the default wallpaper provided by Synology, or select an image that have used as the background image before, click **Select image**, select an image in the **My Images** section, and then click **Select**.
- If you want to use an image stored on your computer, click **Select image**, and then click **Upload** to select the image.

2 Choose from the drop-down menu to decide how the background image is arranged on your DSM desktop.

3 Click **OK**.

Photo Station

This tab is viewable only when DSM **admin** or users belonging to the **administrators** group enable Personal Photo Station service. DiskStation provides the **home/photo** folder for you to store photos and videos that you want to share. The system will create index thumbnails of the photos and videos automatically, and then people can view photo albums via a web browser. See "Enable Personal Photo Station" on Page 95 for more information.

Others

Under **Others**, You can customize other personal options.

To decide whether to expand the Main Menu after login:

1 Tick **Do not expand the Main Menu after login**.

2 Click **OK**.

To skip the confirmation dialog when closing the browser window:

1 Tick **Do not show confirmation dialog when leaving DSM**.

2 Click **OK**.

To remember opened windows and restore them after you log in to DSM next time or refresh the browser window:

1 Tick **Resume DSM to my previous logout status when logging in**.

2 Click **OK**.

To have a quick preview of an open application when you hover your mouse over its application icon on the taskbar:

1 Tick **Enable instant preview on taskbar**.

2 Click **OK**.

> ***Note:*** Instant preview is not supported by Internet Explorer.

To display the widget panel at the right side of your DSM desktop:

1 Tick **Enable widgets**. Tick **Keep the widget panel on top** if you want to keep the panel on top of other DSM windows.

2 Click **OK**.

> ***Note:*** The widget panel is available to DSM **admin** (or a user belonging to the **administrators**) only.

To show Google Chrome notifications on your DSM desktop:

1 Tick **Enable Google Chrome desktop notifications**.

2 Click **OK**.

> ***Note:*** If desktop notifications cannot be successfully enabled here, open Google Chrome browser, click the wrench icon on the top-right corner, and then go to **Options** > **Under the Hood** > **Content settings** > **Notifications** to manage the notification settings. If you want to disable this function, please change the settings at **Notifications** as well.

Chapter

3

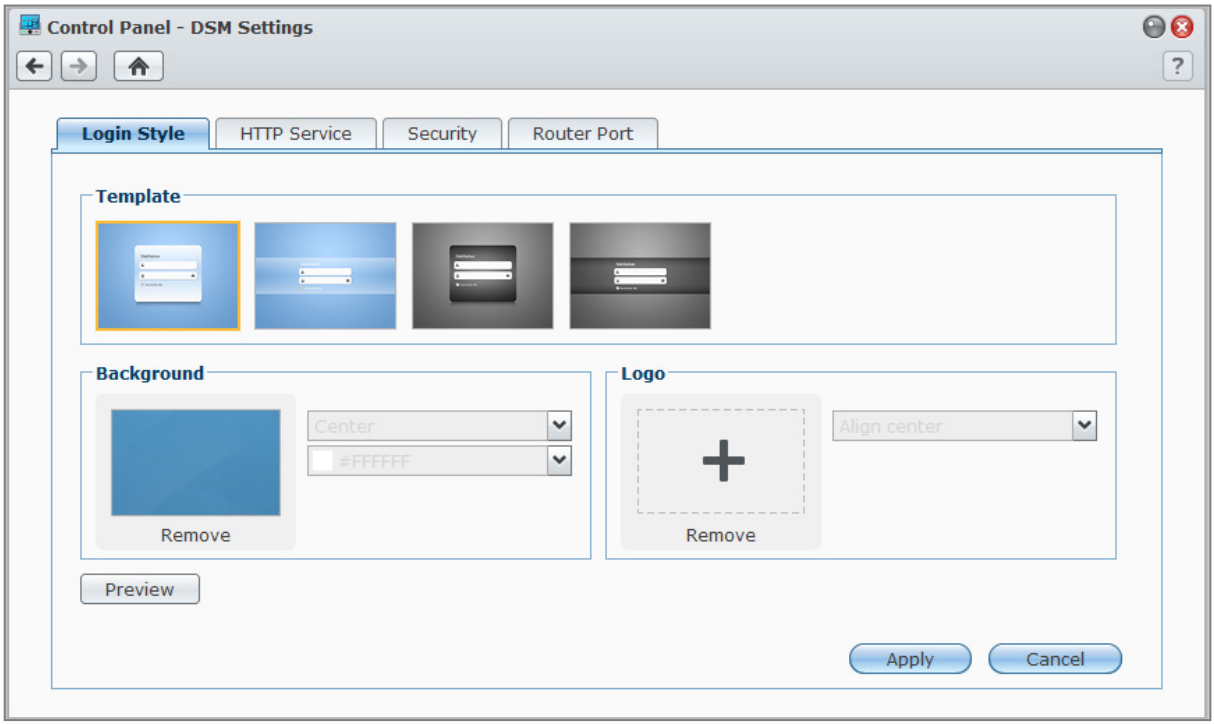
Modify System Settings

After you have connected to Synology DiskStation Manager (DSM) and learned how to access its functions and customize its appearance, you as **admin** or a user belonging to the **administrators** group can begin to modify its basic settings.

This chapter explains how to change the network settings, specify default languages, set up time, and use energy saving features.

Change DSM Settings

Go to **Main Menu** > **Control Panel** > **DSM Settings** to change the following DSM settings.



Login Style

Here you can change the login style by choosing from a variety of templates and displaying a logo or a background image on your DSM's login screen.

To change the login template:

Select a template you want and click **Apply**. The chosen template will be displayed on your login screen next time you log in to your DiskStation.

To change the background image of the login screen:

1 Click the rectangular image or the "+" icon (viewable only when the previously-selected image is removed) at the middle of the rectangle in the **Background** section, and then do any of the following to select your background image:

- If you want to use an image stored on your DiskStation, select a folder in which your images are saved on the left panel and double-click the image, or select the image and click **Select**.

- If you want to use the default wallpaper provided by Synology, click **Default Wallpaper**, double-click the image, or select the image and click **Select**.
- If you want to select an image that have used as the background image before, double-click the image in the **My Previous Images** section, or select the image and click **Select**.
- If you want to use an image stored on your computer, click **Upload** next to **Use My Image**, and then double-click the image to select the image.

2 Choose how the background image is arranged and the background color from the drop-down menus in the **Background** section. You can also click **Preview** to preview the login screen and see if further adjustments are needed.

3 Click **Apply**.

To add a logo to the login screen:

1 Click the rectangular image or the "+" icon (viewable only when the previously-selected image is removed) at the middle of the rectangle in the **Logo** section, and then do any of the following to select your logo image:

- If you want to use an image stored on your DiskStation, select a folder in which your images are saved on the left panel and double-click the image, or select the image and click **Select**.
- If you want to select an image that have used as the logo before, double-click the image in the **My Previous Images** section, or select the image and click **Select**.
- If you want to use an image stored on your computer, click **Upload** next to **Use My Image**, and then double-click the image to select the image.

> ***Note:*** The size of the image file must be less than 1 MB.

2 Choose a way of alignment from the drop-down menu in the **Logo** section. You can also click **Preview** to preview the login screen and see if further adjustments are needed.

3 Click **Apply**.

HTTP Service

Click the **HTTP Service** tab to change the port number or enable HTTPS connection.

To change the default HTTP or HTTPS port number (for DSM and Audio Station):

1 Enter the port number in the **HTTP** or **HTTPS** field.

2 Click **Apply**.

To enable HTTPS connection:

1 Tick **Enable HTTPS connection**.

2 Click the optional **Import Certificate** or check **Automatically redirect HTTP connections to HTTPS**. (See the section below for more information.)

3 Click **Apply**.

When the HTTPS connection is enabled, any connection to Synology DiskStation via the HTTP protocol will be encrypted with the SSL/TLS encrypting mechanism.

More Information

About redirecting to HTTPS connection:

When the option **Automatically redirect HTTP connections to HTTPS** is checked, you will be redirected to port 5001 while trying to access the web management UI through port 5000.

Ports used for HTTPS connection:

- **DSM:** The port number is 5001, so you can access the management UI through the secure channel: https://Synology_Server_IP:5001/
- **Web Station:** The port number is 443, so you can access Web Station through the secure channel: https://Synology_Server_IP:443/ or https://Synology_Server_Name:443/
- **Photo Station:** The port number is 81, so you can access Photo Station through the secure channel: https://Synology_Server_IP:81/photo/ or https://Synology_Server_Name:81/photo/

About importing certificate:

If you have a certificate issued by the trusted Certificate Authority (CA), please click **Import Certificate** to upload your own certificate and private key in order to host a valid SSL server. The certificate should match the private key. **Please keep your private key safely.**

Security

Click the **Security** tab to modify the security level for each DSM browsing session.

To set the logout timer:

1 Enter any value between 1 to 65535 in **Logout timer (minutes)** to specify the idle time period before the automatic logout.

2 Click **Apply**.

An automatic logout occurs if you are inactive for the specified time period.

To skip IP checking:

1 Tick **Enhance browser compatibility by skipping IP checking**.

2 Click **Apply**.

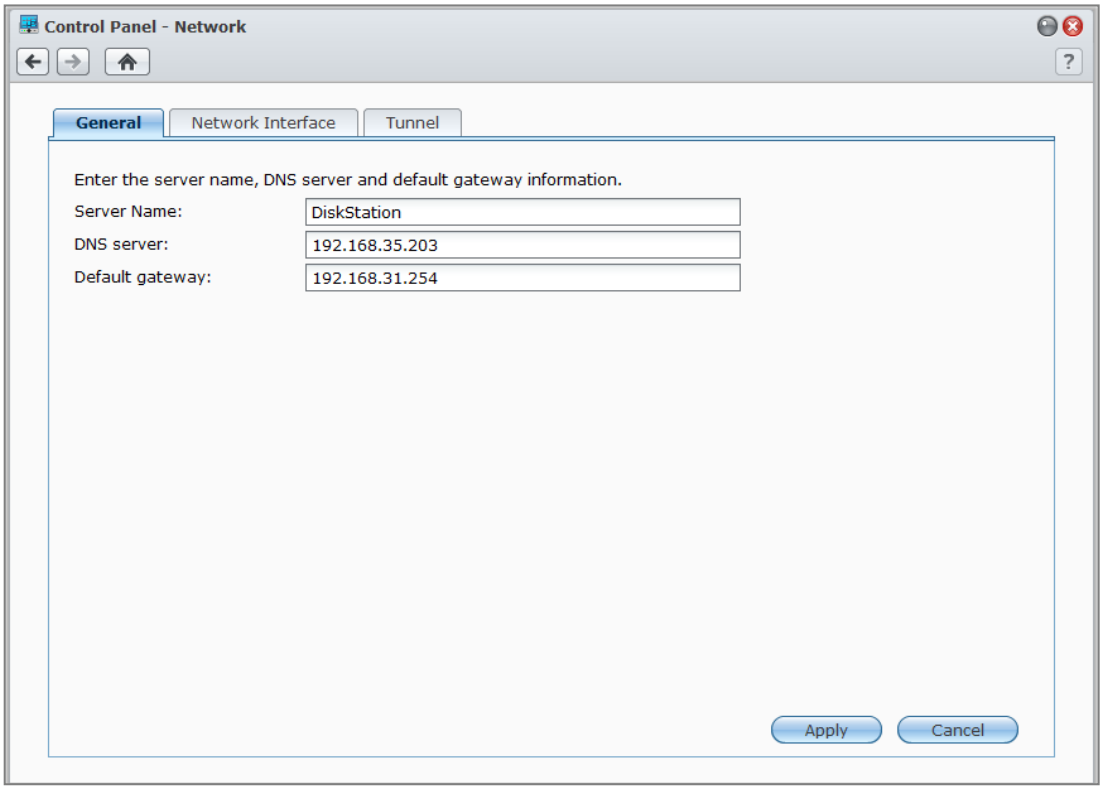
If you access DiskStation through a HTTP proxy and encounter random logouts, you can skip IP checking to avoid this problem. Nonetheless, skipping IP checking will lower the security level.

Router Port

Click the **Router Port** tab to enable router port configuration. When you set up DSM's port forwarding rule on your router, if you specifies different port numbers for the router port (assigned on your router) and the local port (assigned on your DiskStation), you need to enter the router port number here to make sure DiskStation files you shared to Internet services (such as Google docs) can be accessed successfully. For more information, click the **Help** button (with a question mark) at the top-right corner.

Change Network Settings

Go to **Main Menu** > **Control Panel** > **Network** to modify the following network settings of your Synology DiskStation.



General

In this section, you can change your DiskStation identification on the network by entering a server name. You can also set up the domain name server and default gateway here.

To rename DiskStation:

Enter the new server name in the **Server Name** field, and click **Apply**.

To set up domain name server and default gateway:

Enter the IP address in the **DNS server** and **Default gateway** fields, and click **Apply**.

> ***Note:*** The **DNS Server** and **Default Gateway** fields will not be available for modification if all of your network interfaces are configured automatically, or if your DiskStation is connected to the Internet via PPPoE.

Network Interface

In this section, you can connect your DiskStation to the network via any of the following network interfaces.

LAN

If your DiskStation is connected to a local area network, you can click **LAN** or **LAN [number]** (for DiskStations with multiple LAN ports) on the left side to configure the network interface.

To decide how your DiskStation obtains IP address:

1 Choose either of the following:

- **Get network configuration automatically (DHCP)**: Get IP address automatically via DHCP.
- **Use manual configuration**: Manually enter the IP address, subnet mask, DNS, and gateway.

2 Click **Apply**.

To set up IPv6:

Click **IPv6 Setup**. See "IPv6 Setup" on Page 21 for more information.

Term Explanation
Jumbo Frames: Jumbo Frames are Ethernet frames with more than the standard 1500 bytes of Maximum Transmission Unit (MTU), allowing Ethernet transmission of large files to be more efficient. It can only be enabled under Gigabit network environment. To ensure Jumbo Frame works properly, all the computers and devices across the network accessing your DiskStation must support it and use the same MTU value.

Bond

For DiskStations with multiple LAN ports, you can combine multiple LAN interfaces into the **Bond [number]** interface with Link Aggregation[1]. You can configure this interface as you would with any LAN interface.

To combine multiple LAN interfaces with Link Aggregation:

1 Click **Create**.

2 Choose any of the following modes and click **Next**:

> ***Note:*** Before you enable Link Aggregation, please make sure all LAN cables are connected to the same switch.

- **IEEE 802.3ad Dynamic Link Aggregation**: IEEE 802.3ad is the standard for most Link Aggregation implementations. A switch with 802.3ad support is required to use in this mode.
- **Network Fault Tolerance only**: If the LAN 1 port becomes unavailable, the system will use LAN 2 to provide service. You can select this option if your switch does not support IEEE 802.3ad.

3 Select two or more LAN interfaces that will be used for Link Aggregation, and click **Next**.

4 Configure the network settings and click **Apply**.

To separate the Bond interface into multiple LAN interfaces:

1 Click the **Bond [number]** interface on the left side.

2 Click **Remove** and then click **Apply**.

Term Explanation
Link Aggregation: For DiskStation with multiple LAN ports, you can set your DiskStation to connect multiple LAN cables to the network at the same time, or assign it with two IP addresses under different subnets. With Link Aggregation enabled, trunking (combining network bandwidth of aggregated LAN interfaces for multiplied connection speed) and network fault tolerances (maintaining network connection when any of the aggregated LAN interfaces is unavailable) are supported.

Wireless[2]

Click **Wireless** on the left side to connect Synology DiskStation to a wireless network.

> ***Note:*** Wireless network is available only when a wireless dongle is plugged into the USB port of your Synology DiskStation.

To set up a wireless network:

Click **Set up a wireless network** and choose from the following options (If you are already connected to a wireless network, click **Disconnect** first).

- **Join a wireless network**: The wizard will scan available wireless access points or Ad-Hoc networks with their signal strength and security status. If the access point you want to access is locked with password protection, the wizard will ask you to enter the password.
- **Connect to a hidden wireless network**: If an access point doesn't broadcast its SSID (Network Name) for privacy reason, it will not be discovered during the scanning. You can manually connect to those hidden access points by entering the required information manually.

---

[1] Link Aggregation is only supported on DiskStations with multiple LAN ports.
[2] Wireless network is supported on specific models only.

- **Create an Ad-Hoc Network**: In addition to infrastructure network, in which a central access point (AP) bridges the wireless network to a wired Ethernet network, Ad-Hoc network is also widely used. In an Ad-Hoc network, all wireless devices within range of each other can communicate in a peer-to-peer fashion without a central access point. To set up an Ad-Hoc network, all wireless devices have to be configured for Ad-Hoc mode instead of the infrastructure mode.

> ***Note:*** For a list of compatible wireless dongles, visit **www.synology.com**.

IPv6 Setup

When you are configuring the **LAN** or **Wireless Network** interface, click the **IPv6 Setup** button to change the IPv6 settings.

Synology DiskStation supports IPv4/IPv6 dual stack scheme. This means that both IPv4 and IPv6 can work simultaneously on Synology DiskStation. The default setting for IPv6 is **Auto**.[1]

On the **IPv6 Setup** page, choose between the different setup types:

- **Auto**: DiskStation will automatically generate a local IPv6 address. This is generated based on DiskStation's MAC address.
- **DHCP**: DiskStation will automatically get an IPv6 address from the DHCP server which supports IPv6.
- **Manual**: Set up IPv6 manually by entering **IPv6 address**, **Prefix length**, and **Default gateway**.
- **Off**: Disable IPv6 support.

> ***Note:*** If you want to join an IPv4 network environment with IPv6 address, you need to enable IPv6 Tunnel. See the section below for more information.

PPPoE

Click the **PPPoE** on the left side if your Synology DiskStation is connecting to a DSL or cable modem, and your Internet Service Provider (ISP) uses PPPoE (Point to Point Protocol over Ethernet).

To connect to the Internet via PPPoE:

1. Click **PPPoE Setting**.
2. Enter the account information provided by your ISP.
3. Click **OK**.

> ***Note:*** If you are still facing connection problems, contact your Internet Service Provider.

Hotspot[2]

If there is a wireless dongle[3] connected to the USB port of your Synology DiskStation, you can enable hotspot on your DiskStation to turn it into a wireless access point that can share its wireless connection with computers or mobile devices within the range of the Wi-Fi network.

To enable Hotspot on your DiskStation:

1. Tick **Enable hotspot**.
2. Specify the SSID, the wireless mode and width, and the transmit power for your Wi-Fi network.
3. If you want to secure your Wi-Fi network with the authentication mechanism, tick **Enable wireless security**, and then choose the options to specify the authentication information. Client devices will be required to enter those information before they could access your Wi-Fi network.
4. Click **Apply**.

---

[1] IPv6 service is only supported on 08-series models or later (excluding 108j, 109j).
[2] Hotspot is only supported on specific models only.
[3] For a complete list of supported wireless dongles, visit **www.synology.com**.

Tunnel

Tunnel is a technique that encapsulates IPv6 packets within IPv4 packets, allowing isolated IPv6 host or network to be compatible with IPv4 network backbone.

Click the **Tunnel** tab to allow your DiskStation to gain Internet access via IPv6 under the IPv4 environment.

To setup IPv6 Tunnel:

1 Tick **Enable tunnel**.

2 In **Server address**, enter the hostname or the IP of the tunnel service provider.

3 Select if you want to **Connect anonymously** or **Connect with an existing account**. If you choose the latter, please also enter **User name** and **Password**.

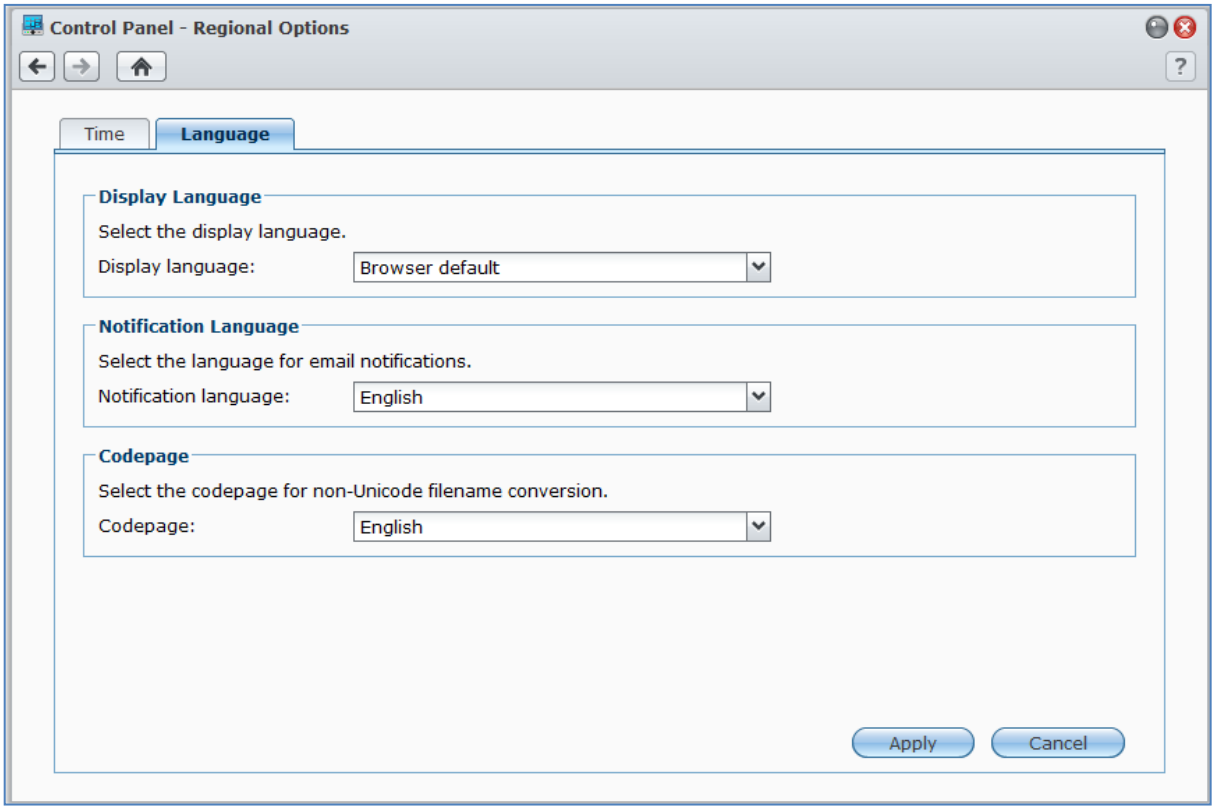
4 Click **Apply** to save the settings.

Note:

- Your external IPv6 address may be automatically updated by the service provider. However, Synology DiskStation will not remove the old IPv6 address immediately.
- If you are still facing connection problems, contact your Internet Service Provider.

Modify Regional Options

Go to **Main Menu** > **Control Panel** > **Regional Options** to configure the following regional options.



Language

Click the **Language** tab to set the language for Synology DiskStation Manager, email notification, and specify the codepage for Unicode filename conversion.

- **Display Language**: Choose your preferred display language, or have it the same as your default browser setting.
- **Notification Language**: Set your preferred language for email notification from Synology DiskStation.

- **Codepage**: Synology DiskStation uses Unicode to avoid file inaccessibility from computers using different languages. But for the following devices or applications to use Synology DiskStation services without problem, you need to choose the appropriate codepage for them:
  - Computers without Unicode support
  - Applications that convert non-Unicode strings to Unicode, such as FTP service, UPnP support, music metadata indexing

Set Up Time

Click the **Time** tab to set up the time. You can check the current time, manually set the server's date and time, or have them set automatically using a network time server.

To set the time zone:

1. Choose a time zone from the **Time zone** drop-down menu.
2. Click **Apply**.

To set the date and time manually:

1. Choose **Manually** and select the date and time.
2. Click **Apply**.

To sync the date and time with NTP server:

1. Make sure a valid DNS server IP has been entered at **Main Menu** > **Control Panel** > **Network** and that your DiskStation is connected to the Internet.
2. Choose **Synchronize with a NTP server**.
3. Assign a sync frequency from the drop-down menu.
4. Enter the address of your network time server, or choose a server from the drop-down menu.
5. Click **Update now** to make sure you can successfully synchronize time with the server.
6. Click **Apply**.

More Information

Network Time Protocol (NTP) is used to synchronize the time of all clients and servers over a data network.

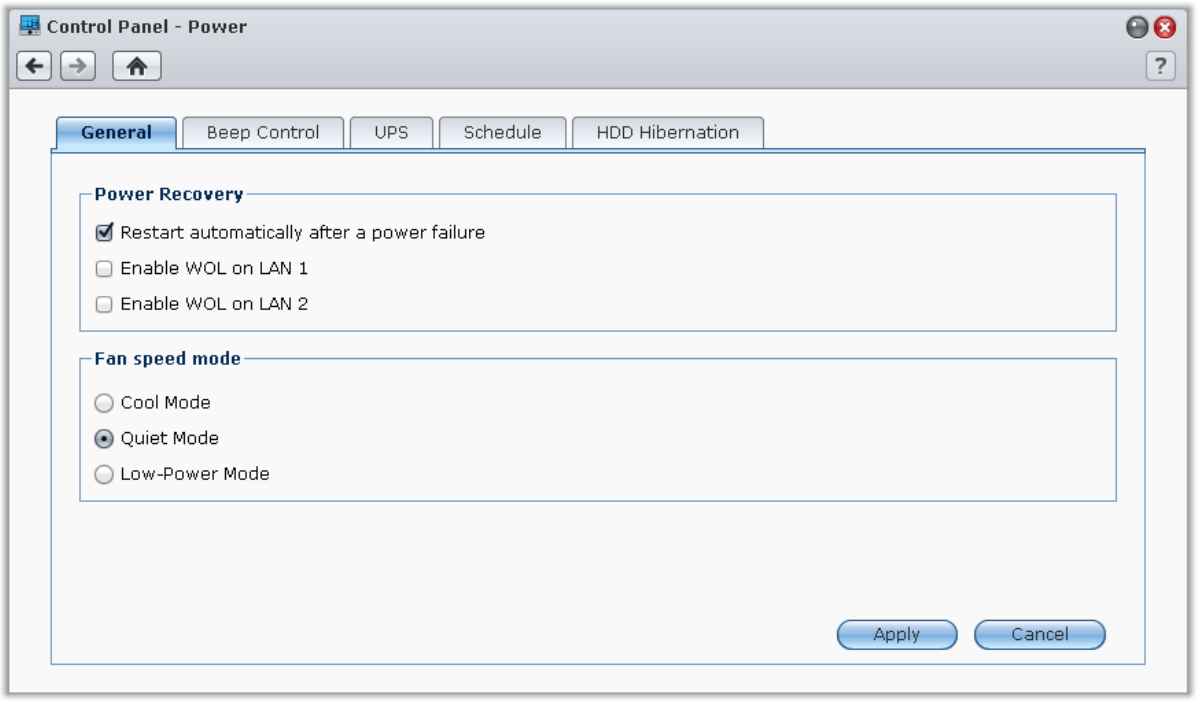
Below are a few recommended NTP servers:

- time.apple.com
- time.asia.apple.com
- time.euro.apple.com
- time.nist.gov

For more information about NTP Server, please visit **http://www.eecis.udel.edu/~mills/ntp/servers.html**

Use Energy Saving Features

Go to **Main Menu** > **Control Panel** > **Power** to manage the following energy saving features provided by DSM.



General

Click the **General** tab to set up power recovery or Wake on LAN (WOL)[1], or conduct FAN controls.

To enable the power recovery function:

1 Tick **Restart automatically after a power failure**. If the DiskStation was shut down abnormally due to a power failure, ticking this option will boot up DiskStation automatically after power has been restored.

2 Click **Apply**.

To enable Wake on LAN:

1 Tick **Enable Wake on LAN** (or **Enable WOL on LAN [number]** for DiskStations with multiple LAN ports).

2 Click **Apply**.

More Information

About Wake on LAN: After Wake on LAN is enabled for your DiskStation, you can turn on Synology DiskStation over the local area network or the Internet by using a WOL (Wake on LAN) application. Activate the function by entering DiskStation's IP address (or DDNS hostname) and MAC address.

Wake on LAN works only after Synology DiskStation is shut down properly by pressing the **Power** button or selecting **Shutdown** from DSM's Main Menu, and its power cord is plugged into a working power outlet.

Note: You can also perform Wake on LAN for supported Synology DiskStation with Synology Assistant. See the Help of Synology Assistant for more information.

To control fan speed:

1 Choose the appropriate fan speed mode according to your need (**Cool Mode**, **Lower-Power mode** or **Quiet mode**), or according to the size of your hard disks (**2.5" hard disk mode** or **3.5" hard disk mode**), depending on the DiskStation models you are using.

2 Click **Apply**.

---

[1] Wake on LAN is supported on specific models only. Visit **www.synology.com** for more information.

Cool Mode or **3.5" hard disk mode** will provide better cooling effect, while **Quiet Mode** or **2.5" hard disk mode** can further reduce the noise level.

Beep Control

Click the **Beep Control** tab to have DiskStation play beep sounds under certain circumstances.

To manage beep control:

Tick or uncheck the checkboxes and click **Apply**.

UPS

Under the **UPS** tab, you can enable UPS support to prevent data loss when an unexpected power failure occurs.

To enable local UPS support:

1 Connect a local UPS to the USB port of your DiskStation.

2 Tick the **Enable UPS support** checkbox.

3 Set the **Time before DiskStation enters Safe Mode**.

> ***Note:*** If the local UPS is low on battery, or the network UPS server enters Safe Mode, DiskStation will ignore the specified time period and enter Safe Mode immediately.

4 You can decide whether to send a shutdown signal to the UPS when the system enters Safe Mode. Most UPS can restore power supply automatically when the power recovers.

5 Click **Apply**.

Term Explanation

When entering **Safe Mode**, the system will first stop all services and unmount all data volumes to prevent data loss, so that when the UPS shuts down, the system will be turned off safely. If the Power Recovery function has been enabled, the system will restart automatically when power is restored.

To enable network UPS support:

1 Tick the **Enable UPS support** checkbox.

2 Enter the **Network UPS server IP**. (Make sure the server allow connection from Synology DiskStation)

3 Set the **Time before DiskStation enters Safe Mode**.

4 Click **Apply**.

More Information

Network UPS support requirements:

- You will need another server connected to an UPS that can be communicated via internet, i.e. a network UPS server.
- A network device, such as a switch or a hub, should be connected to the same UPS, so that Synology DiskStation can still communicate with network UPS server during an unexpected power failure.

To enable Network UPS server:

1 Connect a USB UPS to Synology DiskStation.

2 Tick the **Enable UPS support** checkbox.

3 Tick the **Enable Network UPS Server** checkbox.

4 Enter the IP addresses which will be allowed to connect to Synology DiskStation.

5 Click **Apply**.

Schedule

Click the **Schedule** tab to start up or shut down automatically at a specified time.

To add a new startup/shutdown schedule:

1 Click the **Create** button to open the **Add Schedule** dialog.

2 Choose **Startup** or **Shutdown**.

3 Set the **Date** and **Time** for startup or shutdown.

4 Click **OK**.

5 Click **Save**.

The new schedule will be added to the schedule list.

To edit a schedule:

1 Select the schedule and click **Edit** to edit the schedule.

2 Click **OK**.

3 Click **Save**.

To enable or disable a schedule:

1 Tick or uncheck the checkbox for the schedule.

2 Click **Save**.

To enable or disable all schedules:

1 Tick or uncheck the Enabled checkbox.

2 Click **Save**.

To delete a schedule:

1 Select a schedule and click **Delete**.

2 Click **Save**.

To view schedule summary:

Click **Summary** to browse the weekly schedule for startup/shutdown.

> ***Note:*** You can specify up to 100 schedules for one DiskStation.

HDD Hibernation

Click the **HDD Hibernation** tab to manage disk hibernation for all internal or external disks on your DiskStation.

When a disk enters HDD hibernation mode, it will stop spinning and become inactive, which not only saves energy but also extends the disk's lifespan.

Chapter 4

Manage Storage Space

Before sharing Synology DiskStation services with your users, you need to set up storage spaces first. This chapter explains how to use Storage Manager to set up storage space (including volumes, Disk Groups, iSCSI Targets, iSCSI LUNs), access external disks connected to DiskStation, and check hard drive's status.

What is Volume and Disk Group?

With the hard drives installed on your DiskStation, you can create volumes for storing and sharing your files.

> ***Note:*** For more information about setting up file sharing on your DiskStation, see "Chapter 7: Set Up File Sharing" on Page 48.

Volume Creation Methods

For Synology DiskStation with 2 or more bays, you can create a volume with the following methods:

- **Combine several hard disks into a volume:** This method allows you to create a volume with data protection. See "Create a Volume Using the Quick Mode" on Page 29 and "Create a Volume by Combining Several Hard Disks" on Page 29 for more information.
- **Combine several hard disks into a Disk Group, and then create multiple volumes on the Disk Group:** This method not only allows you to create a volume with data protection, but you can also specify volume capacity according to your needs. See "Create a Volume by Allocating Partial Space on a Disk Group" on Page 29 and "Create a Disk Group" on Page 30 for more information.

Synology DiskStation Supported RAID Types

For Synology DiskStation with 1 bay, you can create a **Basic** volume. For Synology DiskStation with 2 or more bays, you can choose between several RAID types during volume or Disk Group creation. Some of the RAID types can provide data protection, which means data integrity is protected when one or two of the hard drives fail.

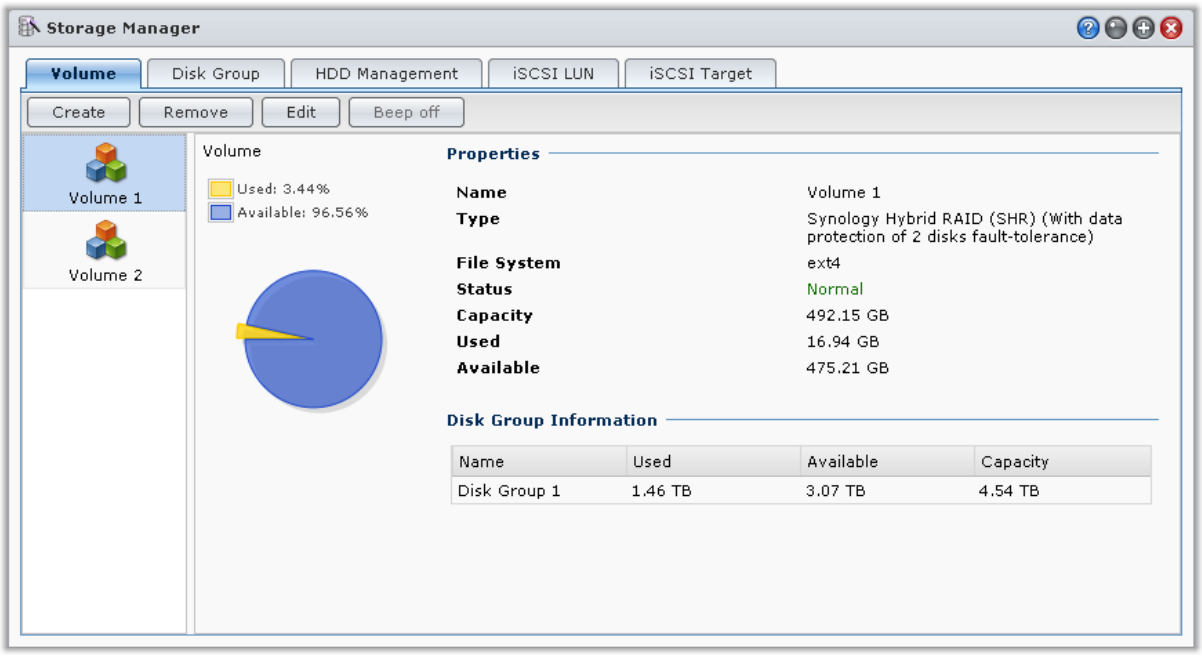
RAID Type	HDD #	Allowed Failed HDD #	Description	Capacity
SHR[1]	1	0	**Synology Hybrid RAID (SHR)** can optimize the storage capacity when combining hard drives with different sizes. If a SHR storage space is composed of two or three hard drives, data integrity is protected when one of the hard drives fail. If a SHR storage space is composed of four or more hard drives, data integrity is protected when one or two of the hard drives fail.	1 x (HDD size)
	2 - 3	1		Optimized by the system
	≧ 4	1 - 2		
Basic	1	0	A **Basic** volume is created with one hard drive as an independent unit. When creating a Basic volume, you can select only one hard drive at a time.	1 x (HDD size)
JBOD	≧2	0	**JBOD** is a collection of hard drives.	Sum of all HDD sizes
RAID 0	≧2	0	Combining multiple disks to build a storage space, **RAID 0** offers **Striping**, a process of dividing data into blocks and spreading the data blocks across several hard drives, but without safety measures.	(HDD #) x (Smallest HDD size)

[1] RAID types except for Basic are supported on specific models only. Visit www.synology.com for more information.

RAID Type	HDD #	Allowed Failed HDD #	Description	Capacity
RAID 1	2 - 4	(HDD #) - 1	The system will write identical data to each hard drive at the same time, so data integrity is protected when at least one disk is normal.	Smallest HDD size
RAID 5	≧3	1	This configuration includes a backup option. It uses parity mode to store redundant data on space equal to the size of one disk for later data recovery.	(HDD # – 1) x (Smallest HDD size)
RAID 5+Spare	≧4	2	A **RAID 5+Spare** storage space requires at least four drives, one of which will act as a **hot spare drive** to rebuild the failed drive of the volume automatically.	(HDD # – 2) x (Smallest HDD size)
RAID 6	≧4	2	**RAID 6** provides extra data protection. It uses parity mode to store redundant data on space equal to the size of two disks for later data recovery.	(HDD # – 2) x (Smallest HDD size)
RAID 10	≧4 (even number)	1 HDD within each RAID 1 group	**RAID 10** has the performance of **RAID 0** and data protection level of **RAID 1**. **RAID 10** combines two hard drives into a RAID 1 group, and combines all the groups with RAID 0.	(HDD # / 2) x (Smallest HDD size)

Manage Volumes or Disk Groups with Storage Manager

Go to **Main Menu** > **Storage Manager** and click the **Volume** or **Disk Group** tab to create, set up, and manage volumes or Disk Group.



Create a Volume

The Volume Creation Wizard allows you to create a volume on your DiskStation in several ways.

> ***Note:*** Volume creation might take a while to finish, depending on the capacity to be created.

Create a Volume Using the Quick Mode

The system will create a SHR volume, which optimizes space allocation based on the capacity of the chosen hard disks.

To create a SHR volume using the Quick mode:

1. Click the **Volume** tab.
2. Click **Create** to open the Volume Creation Wizard.
3. Choose the **Quick** mode, and click **Next**.
4. Choose the hard disks you want to add to the volume, and click **Next**.
5. If you select 4 or more disks in the previous step, choose the data protection level according to your needs.
6. Click **Yes** to confirm, and then choose whether to perform disk check. Click **Next** to continue.
7. Click **Apply** to start volume creation.

Create a Volume by Combining Several Hard Disks

This action allows you to create a volume by combining several hard disks.

To create a volume by combining several hard disks:

1. Click the **Volume** tab.
2. Click **Create** to open the Volume Creation Wizard.
3. Choose the **Custom** mode, and click **Next**.
4. Choose **Single Volume on RAID**, and click **Next**.
5. Choose the hard disks you want to add to the volume, and then click **Next**.
6. Click **Yes** to confirm, and then choose available RAID type for the new Disk Group. Click **Next** to continue.
7. Choose whether to perform disk check, and then click **Next**.
8. Click **Apply** to start volume creation.

Create a Volume by Allocating Partial Space on a Disk Group

This action allows you to create a volume by allocating partial space on a Disk Group.

To create a volume by allocating partial space on a Disk Group:

1. Click the **Volume** tab.
2. Click **Create** to open the Volume Creation Wizard.
3. Choose the **Custom** mode, and click **Next**.
4. Choose **Multiple Volume on RAID**, and click **Next**.
5. Choose either of the following:
   - **Create a new Disk Group**: This action will create a new Disk Group from unused hard disks, and then create a volume on the newly-created Disk Group. Click **Next** and do the following:
     a. Choose the hard disks you want to add to the Disk Group, and then click **Next**.
     b. Click **Yes** to confirm, and then choose available RAID type for the new Disk Group. Click **Next** to continue.
     c. Choose whether to perform disk check, and then click **Next**.

     > ***Note:*** The newly-created Disk Group will be displayed under the **Disk Group** tab. You can also create a Disk Group by following the instructions of "Create a Disk Group" (shown below).

   - **Choose an existing Disk Group**: This action will create a volume on an existing Disk Group. Choose the Disk Group from the drop-down menu, and click **Next**.

6 On the **Allocate volume capacity** page, enter a number in the **Allocate Size (GB)** field to specify the volume capacity, and click **Next**.

7 Click **Apply** to start volume creation.

Create a Disk Group

You can also create a Disk Group on your DiskStation, and then create multiple volumes on the created Disk Group.

To create a Disk Group:

1 Click the **Disk Group** tab.

2 Choose the hard disks you want to add to the Disk Group, and then click **Next**.

3 Click **Yes** to confirm, and then choose available RAID type for the new Disk Group. Click **Next** to continue.

4 Choose whether to perform disk check, and then click **Next**.

5 Click **Apply** to start Disk Group creation.

To create volumes on the created Disk Group:

Follow the instructions of "Create a Volume by Allocating Partial Space on a Disk Group" on Page 29. Choose **Choose an existing Disk Group** in step 5, and choose the Disk Group to create a volume on it.

More Information

About Shared Folder Quota: DSM doesn't come with shared folder quota support. However, you can limit the maximum size of a shared folder by doing the following:

1 Create a volume and specify its capacity by following the instructions of "Create a Volume by Allocating Partial Space on a Disk Group" (shown above).

2 Create a single shared folder on the newly-created volume. (See "Set Up Shared Folders" on Page 57 for more information.)

3 After the setup is complete, the maximum size of the shared folder will be limited to be the same as the volume capacity.

Remove a Volume or Disk Group

1 Click the **Volume** or **Disk Group** tab.

2 Select the volume or Disk Group you want to remove.

3 Click **Remove** and follow the wizard to remove the volume or Disk Group.

Note: Data stored on the volume or Disk Group will be deleted after you remove the volume or Disk Group. Be careful using this option.

Repair a Volume or Disk Group

The repair function is available for **RAID 1**, **RAID 10**, **RAID 5**, **RAID 5+Spare**, **RAID 6**, and SHR volumes or Disk Groups. Depending on your RAID types, When one or two of the hard drives in the volume or Disk Group fails, it will be in the **degraded** mode. You can repair the volume or Disk Group by replacing the crashed disk(s) to keep the data on the volume or Disk Group protected.

Note: Synology DiskStation provides the **hot swapping** function, allowing you to replace the crashed disk without shutting down your Synology DiskStation.[1]

To identify and replace the crashed disk:

1 Identify the crashed disk by doing one of the following:

- Check the hard drive icons in **Storage Manager**. The icon of the crashed disk will appear with an exclamation mark.

---

[1] This is supported on specific models only. Visit **www.synology.com** for more information.

- Go to **Information** > **Status**, and check the **status** column in the **Hard disk(s)** section. (See "**Check System** Information" on Page 147 for more information.)
- Check the LED indicators on your DiskStation. (See the **Quick Installation Guide** that comes with your installation disc for more information.)

2 Pull out the hard drive tray to replace the crashed disk with a new one.

> ***Note:*** The replacement hard drive size must be larger or equal to the size of the smallest disk in the volume or Disk Group.

To repair a volume or Disk Group:

1 Click the **Volume** or **Disk Group** tab.

2 Click **Manage**.

3 Select **Repair** and follow the wizard to repair the volume or Disk Group.

> ***Note:***
>
> - The status of the repairing hard drive must be **Initialized** or **Not Initialized**.
> - If your volume is created by allocating partial space on a Disk Group (see "Create a Volume by Allocating Partial Space on a Disk Group" on Page 29 for more information), you need to repair its Disk Group.

Change RAID Type

If you have created a **Basic**, **RAID 1** or **RAID 5** volume or Disk Group, you could add a new drive to the Synology DiskStation, and then use Storage Manager to change the RAID type.

Available RAID type change includes:

- Basic to RAID 1, RAID 5 or RAID 5+Spare
- RAID 1 to RAID 5 or RAID 5+Spare
- Add mirror disk to RAID 1
- RAID 5 to RAID 5+Spare or RAID 6
- RAID 5+Spare to RAID 6

To change the RAID type:

1 Click the **Volume** or **Disk Group** tab.

2 Select the volume or Disk Group you want to change.

3 Click **Manage**.

4 Choose **Change RAID type** and follow the wizard to complete the setup.

> ***Note:***
>
> - The status of the volume or Disk Group must be normal.
> - The status of the added drive must be **Initialized** or **Not Initialized**.
> - If you want to change the RAID type, enough number of hard drives for the new type is required. See "Synology DiskStation Supported RAID Types" on Page 27 for the required amount of disks for the RAID type.
> - The size of the replacement hard drive must be larger than the smallest disk size of the volume or Disk Group.

Expand a Volume or Disk Group

You can expand the storage capacity of a volume or Disk Group.

Expand a Volume by Changing Volume Size

If your volume is created by allocating partial space on a Disk Group, you can do the following to expand the volume.

To expand a volume by changing volume size:

1 Under the **Volume** tab, click the volume you want to expand.

2 Click **Edit**.

3 Enter a number in the **Size (GB)** field, or click **Max** to automatically fill in the number of the available size on the Disk Group.

> ***Note:*** The number must be larger than the original volume capacity.

4 Click **OK**.

Expand a Volume or Disk Group by Replacing with Larger Disks

When the internal HDD storage runs out of space, you can follow the steps below to replace a larger HDD without losing the original data.

For one-bay models:

1 Turn off the Synology DiskStation.

2 Replace the internal hard drive with a larger one.

3 Turn on the Synology DiskStation.

4 Reinstall the system. See "Reinstall Synology DiskStation" on Page 158 for more information.

5 Connect the replaced hard drive to the USB or eSATA port.

6 Copy the data from the replaced hard drive to the new hard drive.

7 Remove the replaced hard drive.

For Basic or RAID 0 on models with two or more bays:

1 Back up all data stored on the Synology DiskStation.

2 Turn off the Synology DiskStation.

3 Replace the internal hard drives with larger ones.

4 Turn on the Synology DiskStation

5 Reinstall the system. See "Reinstall Synology DiskStation" on Page 158 for more information.

6 Copy the backup data to the new volume or Disk Group.

For RAID 1 and RAID 5, RAID 5+Spare, and RAID 6:

1 Turn off the Synology DiskStation (skip this step for models that support disk hot swapping).

2 Replace the first internal hard drive with a larger hard drive.

3 Turn on the Synology DiskStation and repair the volume or Disk Group. See "Repair a Volume" on Page 30 for more information.

4 Repeat step 1 to 3 until all internal hard drives are replaced with larger hard drives.

5 The system will expand the volume or Disk Group automatically.

> ***Note:***
>
> - Before replacing the spare disk of a RAID 5+Spare volume or Disk Group, you need to click **Manage**, click **Change RAID type**, and then follow the wizard to change the volume or Disk Group.
> - When the system is removing a volume or Disk Group, all enabled services on other volumes will be temporarily stopped. When the volume or Disk Group is removed successfully, those services will be resumed.
> - You can only remove the hard drive when the volume or Disk Group is in **Normal** status; otherwise it will cause data loss. If the volume or Disk Group is in **Degraded** status, please repair the volume or Disk Group before replacing it.

Expand a Volume or Disk Group by Adding Disks

If you have empty hard drive bays in your Synology DiskStation, you can expand **JBOD**, **RAID 5**, **RAID 5+Spare**, **RAID 6**, and **SHR** volumes or Disk Groups by adding disks.

To expand a volume or Disk Group by adding disks:

1 Install a new hard drive for your Synology DiskStation.

2 Select the volume or Disk Group you want to expand.

3 Click **Manage** and choose **Expand the volume by adding hard disks** (for volume expansion) and **Expand the RAID by adding hard disks** (for Disk Group expansion).

4 Select the hard drive in the **Choose disks** section.

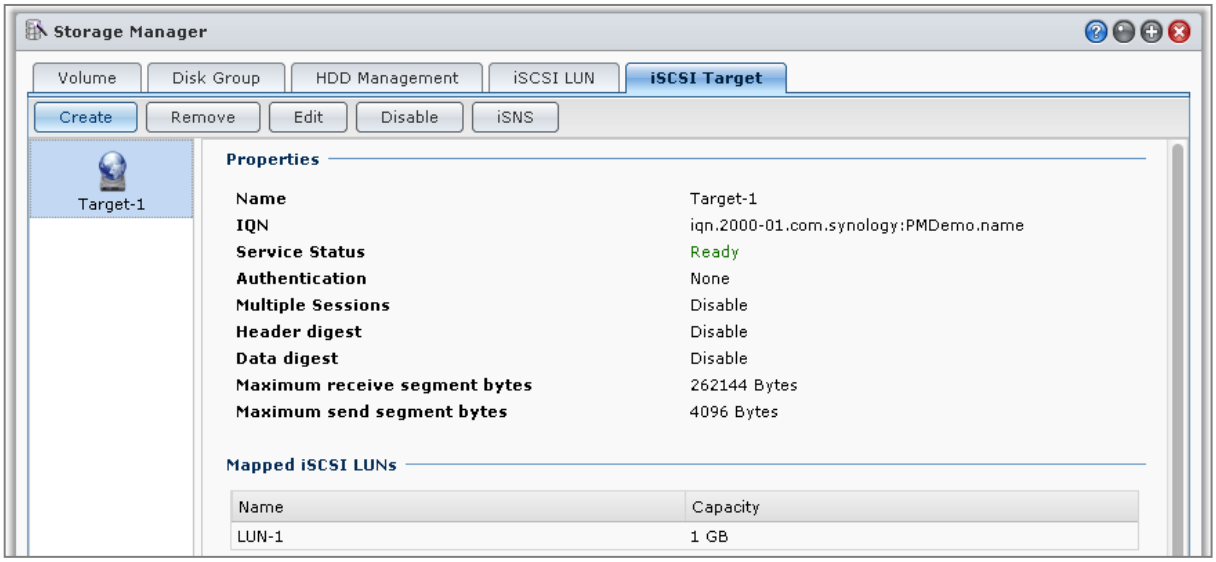
5 Follow the wizard to complete the setup.

Note:

- For RAID 5, RAID 5+Spare, and RAID 6 volume or Disk Group, the hard drive size must be larger than the smallest disk in the volume or Disk Group.
- The status of the volume or the Disk Group must be **Normal**.
- The status of the added disk must be **Initialized** or **Not Initialized**.
- You can also expand your volume with Synology Expansion Unit using the same way.[1]

Manage iSCSI Target with Storage Manager

Go to **Main Menu** > **Storage Manager** and click the **iSCSI Target** tab to manage iSCSI Targets on your Synology DiskStation. You can manage up to 10 or 32[2] iSCSI Targets on one Synology DiskStation, and map iSCSI LUNs to them.



Term Explanation

iSCSI

iSCSI is an Internet Protocol based storage networking standard for linking data storage facilities. By carrying SCSI commands over IP networks, iSCSI can facilitate data transfers over local area networks (LANs), wide area networks (WANs), or the Internet.

Through iSCSI, the space on storage server will be regarded as local disks by client's operation system. But in reality, all data transferred to the disk are actually transferred over network to the storage server.

iSCSI Target and LUN

In SCSI terminology, A LUN (logical unit number) represents an individually addressable (logical) SCSI device that is part of a physical SCSI device (called "Target").

An iSCSI environment emulates the connection to a SCSI hard disk. An iSCSI Target is like a connection interface, and LUNs are essentially numbered disk drives. When an iSCSI Target is connected by an iSCSI initiator (a client), all the LUNs mapped to the iSCSI Target are virtually attached to the client's operation system. Therefore, Initiators can establish and manage file systems on iSCSI LUNs, as they would a raw SCSI or IDE hard drive.

---

[1] Synology Expansion Unit is supported on specific models only. Please visit **www.synology.com**.
[2] 32 iSCSI targets are supported on specific models only. Please visit **www.synology.com**.

To create an iSCSI Target:

1 Click the **Create** button.

2 Enter the iSCSI Target's information, including **Name**, **IQN**, and whether to enable CHAP authentication.

3 Click **Next**.

4 Set up iSCSI LUN mapping. Select **Create a new iSCSI LUN** or **Map existing iSCSI LUNs**.

> ***Note:*** For more information about creating iSCSI LUNs, see "Manage iSCSI LUNs with Storage Manager" on Page 35.

5 Click **Next**.

6 Click **Back** to modify or **Apply** to confirm settings.

Term Explanation
IQN: IQN (iSCSI Qualified Name) is a set of unique name for an iSCSI Target. It should not conflict with iSCSI Target IQNs on other servers. IQN must be less than 128 characters and can include letters(case insensitive), numbers, colons, dashes, and dots. The suggested naming format is iqn.[date].[domain]:[device identifier], for example: **iqn.2000-04.com.synology:storage.diskarray.1**.
CHAP authentication: If you select **CHAP**, the server will be able to verify the client's identity. In **Mutual CHAP**, both the client and the server will authenticate each other. Username can be composed of 1 ~ 12 letters and numbers, and password can be composed of 12 ~ 16 letters and numbers.

To remove an iSCSI Target:

You can remove an iSCSI Target and any mapped iSCSI LUNs. Note that when removing an iSCSI LUN, all data on the iSCSI LUN will be deleted.

1 Select the iSCSI Target you want to remove.

2 Click **Remove**.

3 If you want to remove mapped iSCSI LUNs, select **Delete mapped iSCSI LUNs as well** and select the ones you want to remove.

4 Click **OK**.

To edit an iSCSI Target:

1 Select the iSCSI Target you'd like to edit.

2 Click **Edit**.

3 Edit the settings to your preference. Click **OK** to save the changes.

Term Explanation
CRC Checksum: Enable CRC Checksum to check if any error occurred during data transmission.
Multiple Sessions: Allow multiple sessions from one or more initiators to connect to the same iSCSI Target at the same time. To protect your files from corruption or unexpected data loss, it is strongly suggested that you use a shared file system or cluster system such as VMware Virtual Machine File System (VMFS) and Oracle Cluster File System (OCFS).
Masking: Masking allows an iSCSI Target to be exclusively accessed by specified iSCSI initiator IQNs.

To enable or disable an iSCSI Target:

1 Select the iSCSI Target you'd like to enable or disable.

2 Click **Enable** or **Disable**.

To register iSCSI Targets with an iSNS server:

1 Click **iSNS**.

2 Tick **Enable iSNS**.

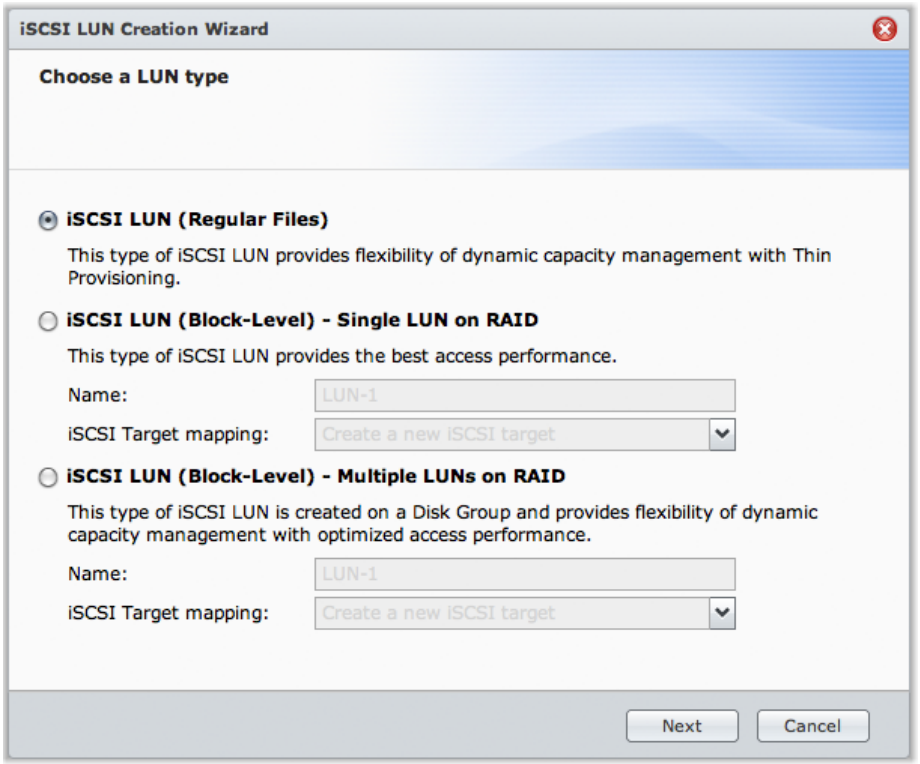
3 Enter the IP address of the iSNS server in the **iSNS Server** field.

4 Click **OK**.

Term Explanation
iSNS iSNS (Internet Storage Name Service) are often used in a local area network with complex storage deployment, facilitating IT staffs to discover storage and manage iSCSI devices. You can register all the iSCSI Targets on your DiskStation with the iSNS server on your network.

Manage iSCSI LUNs with Storage Manager

Go to **Main Menu** > **Storage Manager** and click the **iSCSI LUN** tab to manage iSCSI LUNs on your Synology DiskStation. An iSCSI LUN (logical unit number) can be mapped to multiple iSCSI Targets to perform storage operations such as read or write. You can create up to 10 or 256[1] iSCSI LUNs on your DiskStation.


iSCSI LUN Creation Wizard
Choose a LUN type
iSCSI LUN (Regular Files)
This type of iSCSI LUN provides flexibility of dynamic capacity management with Thin Provisioning.
iSCSI LUN (Block-Level) - Single LUN on RAID
This type of iSCSI LUN provides the best access performance.
Name:
LUN-1
iSCSI Target mapping:
Create a new iSCSI target
iSCSI LUN (Block-Level) - Multiple LUNs on RAID
This type of iSCSI LUN is created on a Disk Group and provides flexibility of dynamic capacity management with optimized access performance.
Name:
LUN-1
iSCSI Target mapping:
Create a new iSCSI target
Next
Cancel

There are 2 ways to create an iSCSI LUN:

- Designate several disks (Block-level).
- Designate a portion of your volume space (Regular Files).

If you create an iSCSI LUN with several disks, you can repair or expand it, or change its RAID type, just like using a volume. (Please see Page 28 of this chapter for detailed information about volume management.)

To create an iSCSI LUN:

1 Click **Create**.

2 Select **Custom**.

3 Click **Next**.

4 Select the iSCSI LUN type you want to create.

- **iSCSI LUN (Regular Files)**: The iSCSI LUN is created by designating a portion of the volume space for its usage. Set up iSCSI LUN configuration, including **Name**, **Location**, **Thin Provisioning**, **Capacity (GB)**, **iSCSI Target mapping**.

[1] 256 iSCSI LUNs are supported on specific models only. Please visit **www.synology.com**.

- **iSCSI LUN (Block-Level) - Single LUN on RAID**: The iSCSI LUN is created by combining several hard disks. Enter the name for the LUN, choose **iSCSI Target mapping** and click Next. You can create and manage the LUN just like working with a volume. See "Create a Volume by Combining Several Hard Disks" on Page 29 for more information about volume creation.
- **iSCSI LUN (Block-Level) - Multiple LUN on RAID**: The iSCSI LUN is created by allocating partial space on a Disk Group. Enter the name for the LUN, choose **iSCSI Target mapping** and click **Next**. You can create and manage the LUN just like working with a volume. You can repair or expand it, or change its RAID type, just like using a volume. See "Create a Volume by Allocating Partial Space on a Disk Group" on Page 29 for more information about volume creation.

5 About **iSCSI** Target mapping:

- If you choose **Map existing** iSCSI **targets** from the **iSCSI Target mapping** drop-down menu, you will be prompted to choose an existing iSCSI Target.
- If you choose **Create a new iSCSI target** from the **iSCSI Target mapping** drop-down menu, you will be prompted to create a new iSCSI Target.

> ***Note:*** For more information about iSCSI Target creation, see "Manage iSCSI Target with Storage Manager" on Page 33 .

6 Follow the wizard to complete the setup.

Term Explanation
Thin Provisioning: Thin Provisioning is a method for optimizing storage utilization by allocating storage space in a dynamic and on-demand manner. This setting is only available for **iSCSI LUN (regular files)**.
iSCSI Target Mapping: Map the iSCSI LUN to one or more iSCSI Targets.

To remove an iSCSI LUN:

By removing an iSCSI LUN, all data on the iSCSI LUN will be deleted. The connection between the iSCSI LUN and any mapped iSCSI Target will also be lost.

1 Select the iSCSI LUN you'd like to remove.

2 Click **Remove**.

3 Click **Cancel** to abort or **OK** to confirm.

To edit an iSCSI LUN:

1 Select the iSCSI LUN you'd like to edit.

2 Click **Edit**.

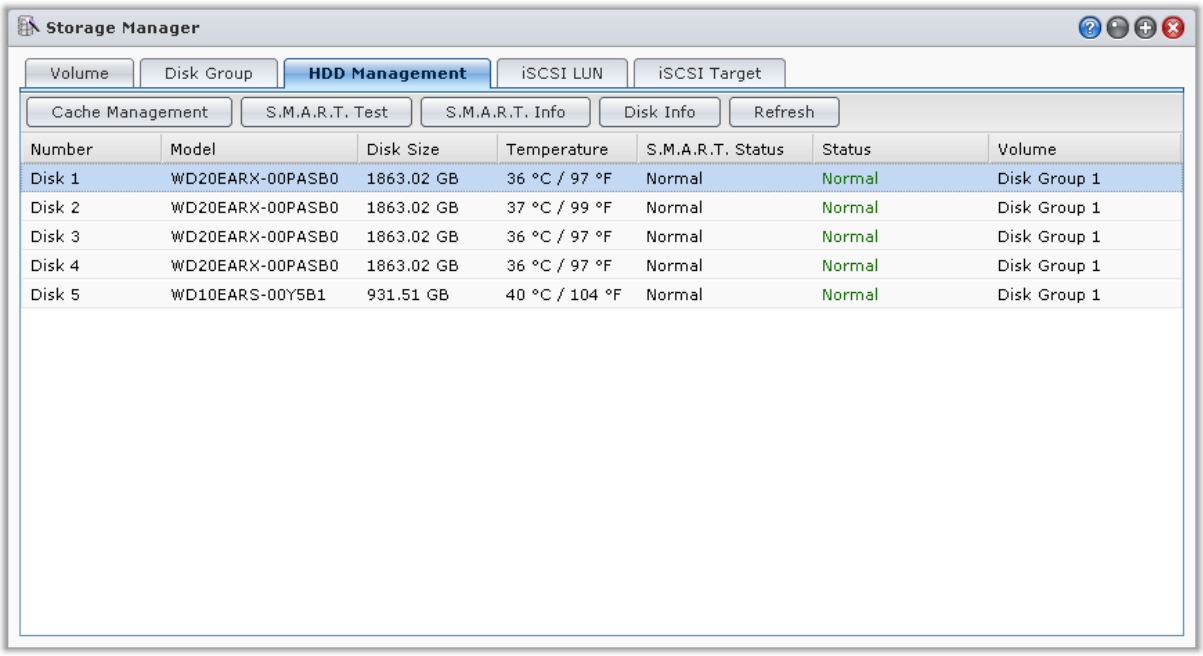
3 Edit the **Properties** and **Mapping** to your preference.

4 Click **OK** to save the settings.

> ***Note:*** To avoid data loss when editing iSCSI LUN capacity, you can only make it larger than the current size.

Manage Hard Disks with Storage Manager

Go to **Main Menu** > **Storage Manager** and click the **HDD Management** tab to manage your hard disks.


Storage Manager
Volume
Disk Group
HDD Management
iSCSI LUN
iSCSI Target
Cache Management
S.M.A.R.T. Test
S.M.A.R.T. Info
Disk Info
Refresh
Number
Model
Disk Size
Temperature
S.M.A.R.T. Status
Status
Volume
Disk 1 WD20EARX-00PASB0 1863.02 GB 36 °C / 97 °F Normal Normal Disk Group 1
Disk 2 WD20EARX-00PASB0 1863.02 GB 37 °C / 99 °F Normal Normal Disk Group 1
Disk 3 WD20EARX-00PASB0 1863.02 GB 36 °C / 97 °F Normal Normal Disk Group 1
Disk 4 WD20EARX-00PASB0 1863.02 GB 36 °C / 97 °F Normal Normal Disk Group 1
Disk 5 WD10EARS-00Y5B1 931.51 GB 40 °C / 104 °F Normal Normal Disk Group 1

Enable Write Cache Support for Hard Disks

Write cache support is only effective on hard disks that support it. Enabling cache offers you enhanced performance on your Synology product. However, to ensure data protection, the usage of a UPS device is strongly recommended. It is also highly suggested that the system is shut down properly every time after use.

In other words, while disabling cache offers the benefit of increasing resilience against abnormal power, there is also the possibility of reduction in performance.

To enable write cache support for your disk:

1 Select a disk on the disk list and click **Cache Management**.

2 Tick **Enable write cache**. By default, this function is enabled.

3 Click **OK**.

Run S.M.A.R.T. Test

Disk S.M.A.R.T. will help you to examine and report the hard disk status to alert possible disk failures. It is recommended that you replace your disk if errors are detected.

To run S.M.A.R.T. test:

1 Select a disk on the disk list and click **S.M.A.R.T. Test**.

2 Choose any of the following test methods and click **Start**:

- **Quick Test**
- **Extended Test**

3 The latest test results are shown in the **Test Result** section.

4 Click **Close** to finish.

Note:

- The exact processing time might vary under different system environment.
- You can also click **Schedule** and follow onscreen instructions to schedule the S.M.A.R.T. tests.

To check S.M.A.R.T. info:

1 Select a disk on the disk list and click **S.M.A.R.T. Info**. The numbers listed can help you to diagnose the status of your disk.

2 Click **Close** to finish.

Check Disk Info

Here you can see the disk's model name, serial number, firmware version, and total size.

To check disk info:

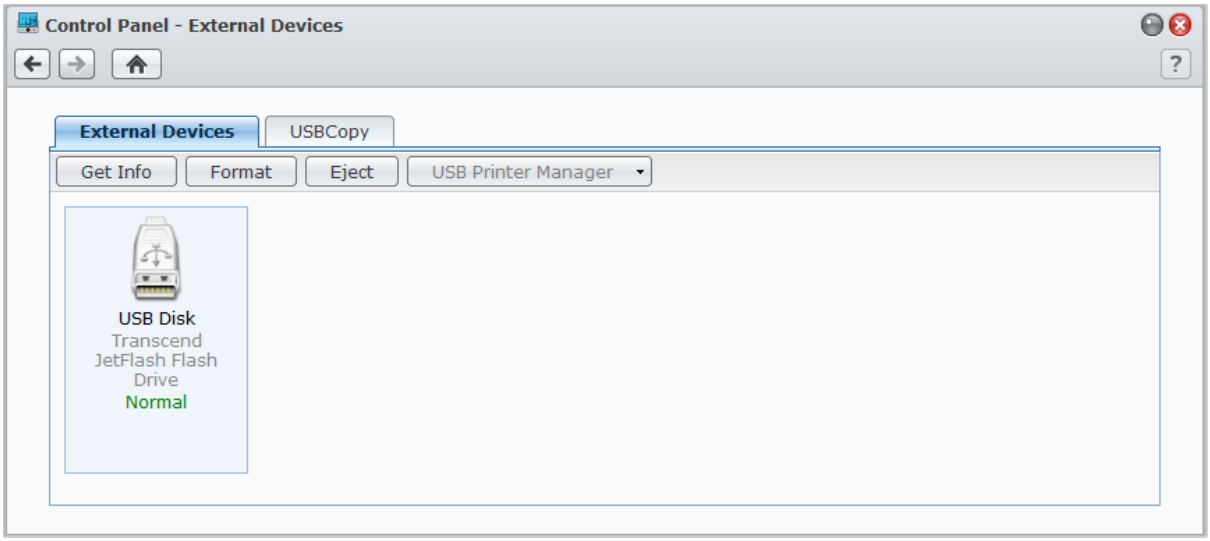
1 Select a disk on the disk list and click **Disk Info**.

2 Click **Close** to finish.

Manage External Disks

You can attach external USB or eSATA disks to the USB or eSATA port of your Synology DiskStation for backup or file sharing purposes.[1]

Go to **Main Menu** > **Control Panel** > **External Devices** to manage the attached external disks.



To attach an external disk:

1 Connect an external USB or eSATA disk to the USB or eSATA port of your Synology DiskStation.

2 A new shared folder named **usbshare1** (for USB device) or **esatashare** (for eSATA device) will be created automatically and ready for access.

Note:

- When more than 1 external USB disk is connected, **usbshare2**, **usbshare3** … will be created.
- DiskStation recognizes the following format: **EXT3**, **EXT4**, **FAT**, **FAT32**, and **NTFS**. Any unrecognized USB disk will have to be formatted first before being used on the system.

To get the information of the disk:

You can access disk information by clicking **Get Info**.

To eject or format an external disk:

Click **Eject** or **Format**.

[1] eSATA is supported on specific models only. Visit www.synology.com for more information.

Note:

- For more information about external disks, see its help by clicking the **Help** button (with a question mark) at the top-right corner.
- You can also manage USB printer here. See "**Set Synology DiskStation** as Print Server" on Page 89 for more information.

Chapter

5

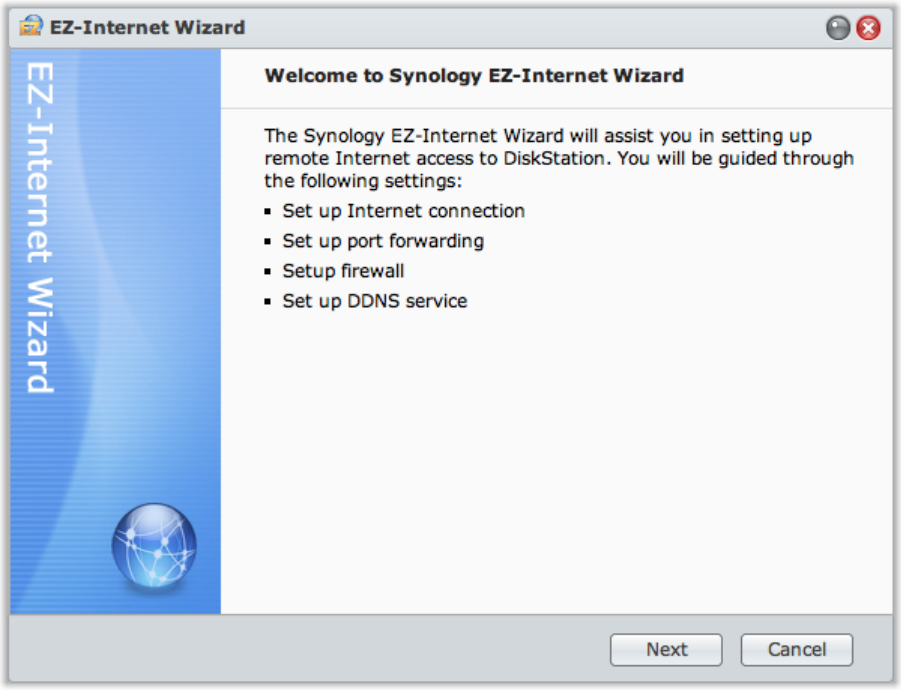
Access your DiskStation from the Internet

You can connect to your Synology DiskStation over the Internet, allowing its services to be accessible from anywhere and anytime.

This chapter explains how to set up Internet connection with the easy-to-use Synology EZ-Internet wizard, or with the more advanced port forwarding function, and register a DDNS hostname for your Synology DiskStation.

Use the EZ-Internet Wizard

The **EZ-Internet** Wizard can set up DiskStation access via the Internet with an easy-to-use wizard, without going through the complicated firewall settings, PPPoE setup, DDNS registration, and router port forwarding configuration.


EZ-Internet Wizard
EZ-Internet Wizard
Welcome to Synology EZ-Internet Wizard
The Synology EZ-Internet Wizard will assist you in setting up remote Internet access to DiskStation. You will be guided through the following settings:
Set up Internet connection
Set up port forwarding
Setup firewall
Set up DDNS service
Next
Cancel

To use the EZ-Internet wizard:

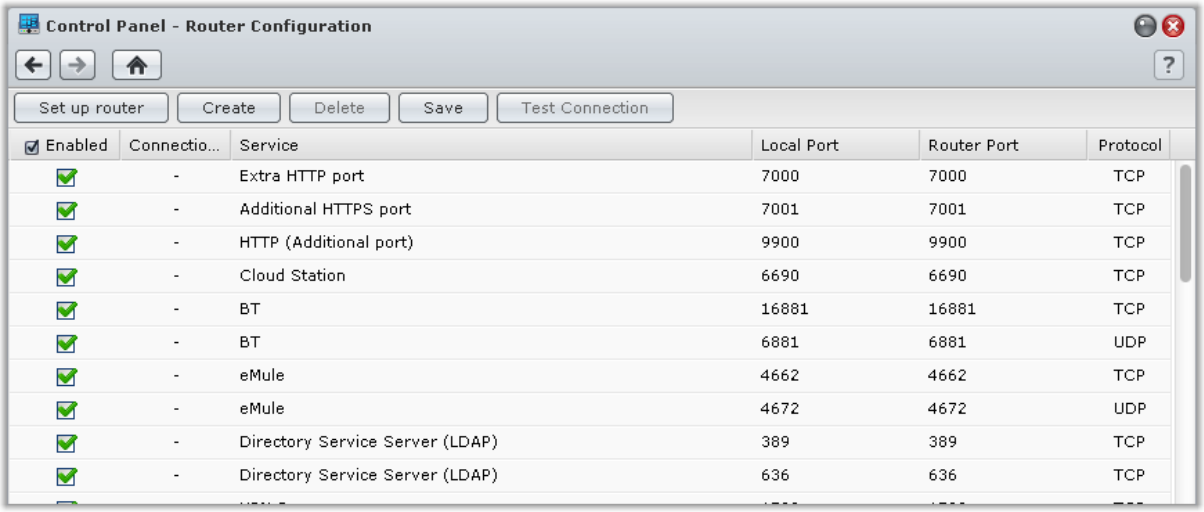
Go to **Main Menu** > **EZ-Internet** and follow the wizard to complete the setup.

Set Up Port Forwarding Rules for Router

If your Synology DiskStation is within the Intranet, you can set up port forwarding rules for the router to allow your Synology DiskStation to be accessible over the Internet.

> ***Note:*** Before you start, make sure you have manually assigned a static IP address for your Synology DiskStation. See "Network Interface" on Page 19 for more information.

Go to **Main Menu** > **Control Panel** > **Router Configuration** to set up your router and port forwarding rules.



Note: To configure port forwarding rules and assign static IP address, you must have the administrative permission to the router.

Set up Router

Before adding port forwarding rules with DSM, you need to set up DiskStation's connection to the router. For more information, click the **Help** button (with a question mark) at the top-right corner.

Add Port Forwarding Rules

Add port forwarding rules to specify the destination ports of your Synology DiskStation that will receive packages from specific router ports.

To add port forwarding rules:

1 Click **Create**.

2 Do one of the following:

- **If you want to create port forwarding rules for system services (for example, FTP, Web Station, etc),** choose **Built-in application** and tick the system services.
- **If you want to create port forwarding rules for custom services,** choose **Custom port**. You can use the following syntax to specify port numbers and range:
  - Use **"-"** to describe port range. For example, **6881-6890**.
  - Use **","** to separate ports. For example: **21,22** or **21,55536-55663**.

Note:

- Some routers don't allow using custom ports for system services forwarding. See the documentation that came with your router for more information.
- Each router port can be used for one forwarding rule only. Using a router port for two or more rules will cause conflicts, and a warning message will appear on the screen. You need to set another port for the rule to avoid conflicts.

3 Click **Save**.

You may need to wait for a few minutes before the rules start working, depending on the models of your routers.

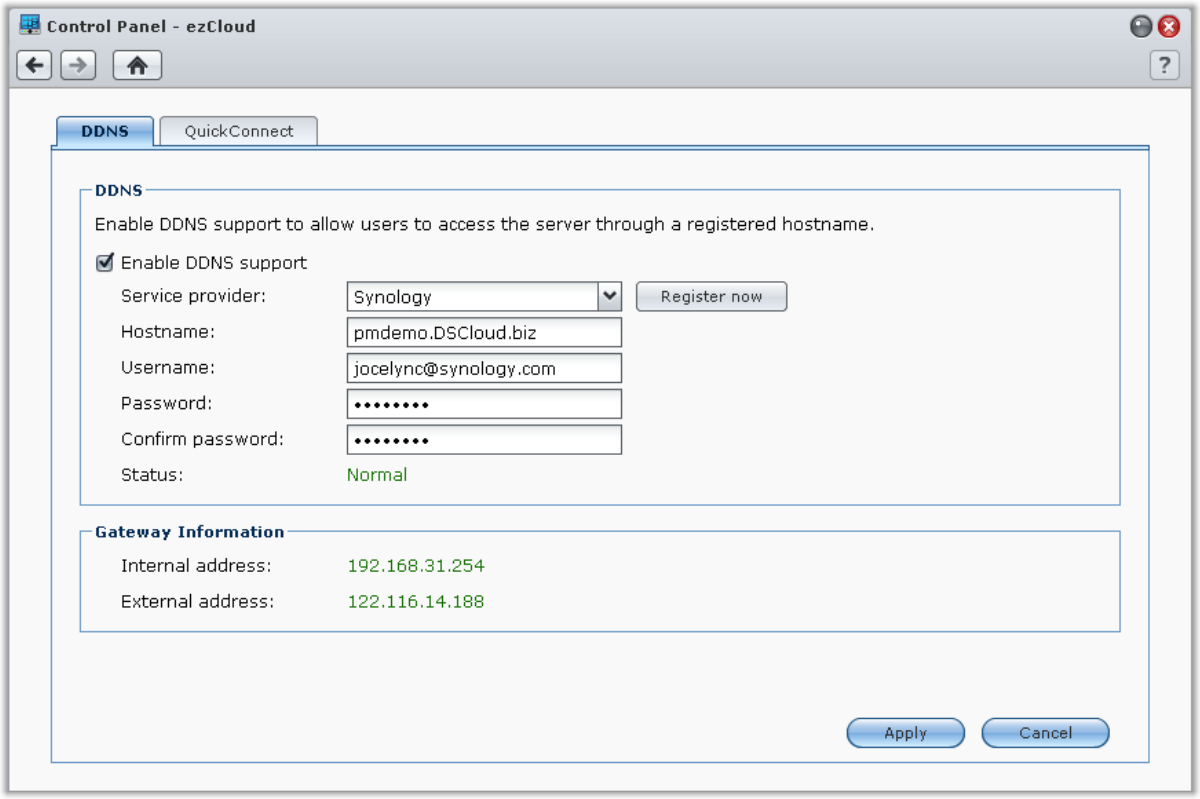
To test whether your rules are working or not:

1 Select the rules you want to test and click **Test Connection**.

2 The result will be displayed in the **Connection Test Result** column.

Publish your DiskStation to the Internet via ezCloud

ezCloud provides the following services to help you easily publish your DiskStation to the Internet.



DDNS

You can register a DDNS (Dynamic Domain Name Server) hostname for your Synology DiskStation, allowing it to be connected anywhere by entering the hostname in the address bar of your web browser.

Once set up, you and your friends no longer need to remember the IP address to access your Synology DiskStation. Simply type in the DDNS hostname on the web browser as you would when connecting to any website. After the setup is complete, the hostname will always point to the external IP of the Synology DiskStation.

Service Requirement

- The DDNS server of the service provider is working normally.
- The gateway connection is normal.
- Synology DiskStation is able to connect to the DNS server.
- The following addresses are unblocked in the Firewall:
  - http://members.dyndns.org:80
  - http://checkip.dyndns.org:80

DDNS will only run in a network environment where there is no proxy server required.

Register a DDNS hostname for Synology DiskStation

Go to **Main Menu** > **Control Panel** > **ezCloud** > **DDNS** and use one of the following methods to enter your DDNS information.

Method 1: Visit any DDNS service provider's website to register a DDNS account

1 Visit any of the following DDNS service providers to register a DDNS account:

- **http://freedns.afraid.org**
- **http://zoneedit.com**

- http://dnspod.com
- http://changeIP.com
- http://ddo.jp
- http://www.selfhost.de/
- http://www.dyndns.org/
- http://www.no-ip.com/
- http://www.3322.org/
- http://www.twodns.de/

2 Tick **Enable DDNS support** and enter the hostname, username, and password for your Synology DiskStation.

3 Click **Apply**.

> ***Note:*** Remember to enter the full domain name in the **Hostname** field. (e.g. philip1234.dyndns.org)

Method 2: Register a DDNS account from Synology

1 Tick **Enable DDNS support**, choose **Synology** from the **Service provider** drop-down menu, and then click **Register Now**.

2 In the window that appears, enter the hostname you want in the **Hostname** field.

3 Enter your account information:

- **If you already have a Synology account,** select **Register a new hostname with an existing Synology account** and enter the account information in the **Email** and **Password** field to log in.
- **If you don't have a Synology account,** select **Create a Synology account and register a new hostname**, fill out all the required fields, and then click **OK** to register a new account.

4 Click **Apply** to finish. The newly registered hostname for your Synology DiskStation will be activated in just a few seconds.

QuickConnect

Go to **Main Menu** > **Control Panel** > **ezCloud** > **QuickConnect** to manage the QuickConnect service. QuickConnect is a solution that can help client applications to connect to your DiskStation via the Internet without setting up port forwarding rules.

Client applications with QuickConnect support include the following:

- DS file (see "Chapter 18: Communicate with Mobile Devices" on Page 160 for more information)
- Cloud Station (see "Sync Files via Cloud Station" on Page 68 for more information)

> ***Note:*** Before enabling QuickConnect for client applications, make sure relevant DSM services are already enabled.

To enable QuickConnect for client applications:

1 Tick the checkboxes for the applications and then click **Apply**.

2 You will see your **ezCloud ID** in the **ezCloud Info** section, which is a combination of numbers used by client applications to gain access to DSM services (see **To access DSM services via QuickConnect** below for more information). If you want to give your ezCloud ID a name that is easier to remember, tick **Customize ezCloud ID** and enter your customized ID in the text field.

> ***Note:***
>
> - The customized ID should consist of alphanumeric characters, "-", and "_", and cannot start with a digit.
> - For better QuickConnect performance, it is recommended that you go to **Main Menu** > **Control Panel** > **Router Configuration** to configure port forwarding for each service:
>   Cloud Station: 6690
>   DS file: 5005
>   DS file (HTTPS): 5006

To access DSM services via QuickConnect:

1 Launch your client application to connect to your DiskStation.

2 When you are prompted to enter the address of your DiskStation, fill in the ezCloud ID to connect to DSM services via QuickConnect.

Troubleshooting

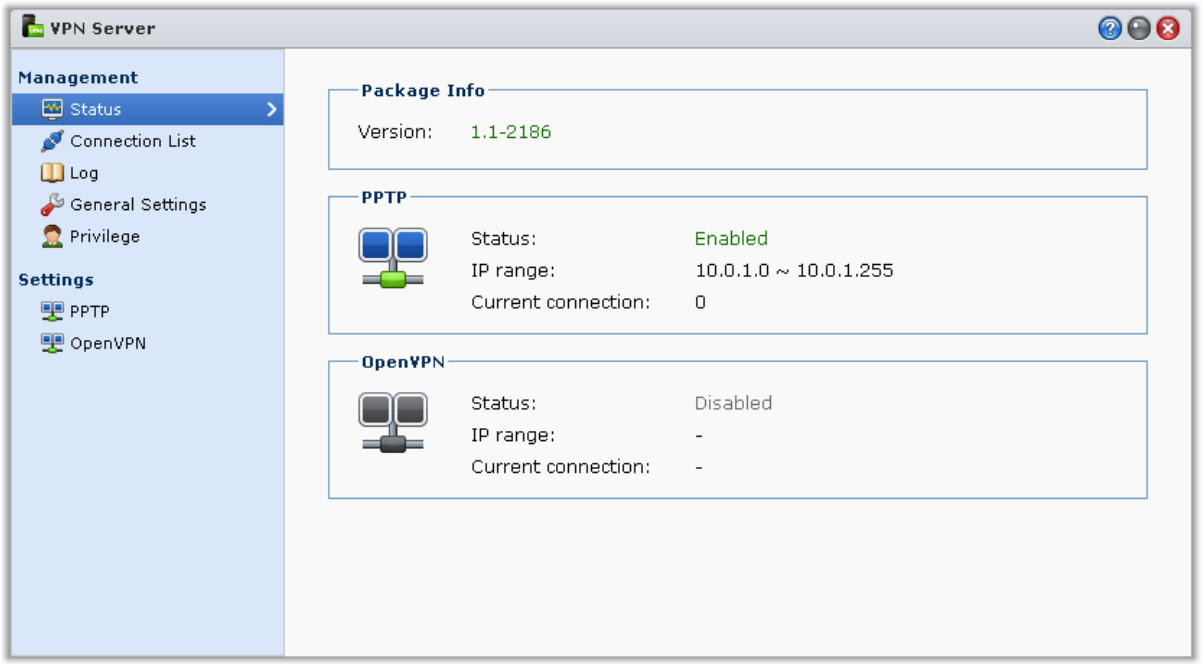
If you see the "Network error occurred" message in the **Status** field indicating the QuickConnect service is stopped due to network errors, please check the following:

- Your DiskStation is connected to an active network (at **Main Menu** > **Control Panel** > **Network** > **Network Interface**).
- The DNS server and default gateway settings are properly set (at **Main Menu** > **Control Panel** > **Network** > **General**).

When the network errors are fixed, the QuickConnect service should resume automatically within a few minutes.

Set up VPN Connection

VPN Server is an add-on package that enables your DiskStation to become a PPTP/OpenVPN VPN (virtual private network) server, allowing DSM local users over the Internet to access resources shared within DiskStation's local area network. For more information about VPN, refer to here.



Set up your DiskStation as a VPN Server

To install VPN Server on your DiskStation, go to **Main Menu** > **Package Center**. For more information about VPN Server, run and launch the package, and then click its **Help** button (with a question mark) at the top-right corner. To learn more about how to access DiskStation's VPN Server with a VPN client, refer to the **VPN Server User's Guide** available at Synology's **Download Center**.

Connect your DiskStation to a VPN Server

Go to **Main Menu** > **Control Panel** > **VPN** to set your DiskStation as a VPN client to connect to a VPN server, and then gain access to the virtual private network. For each VPN server, you can create or modify its connection profile, and then use the profile to connect to the server with a simple click. For more information about how to set your DiskStation as a VPN client, click the **Help** button (with a question mark) at the top-right corner.

Note: You are not allowed to set your DiskStation as a VPN server and client at the same time.

Chapter

6

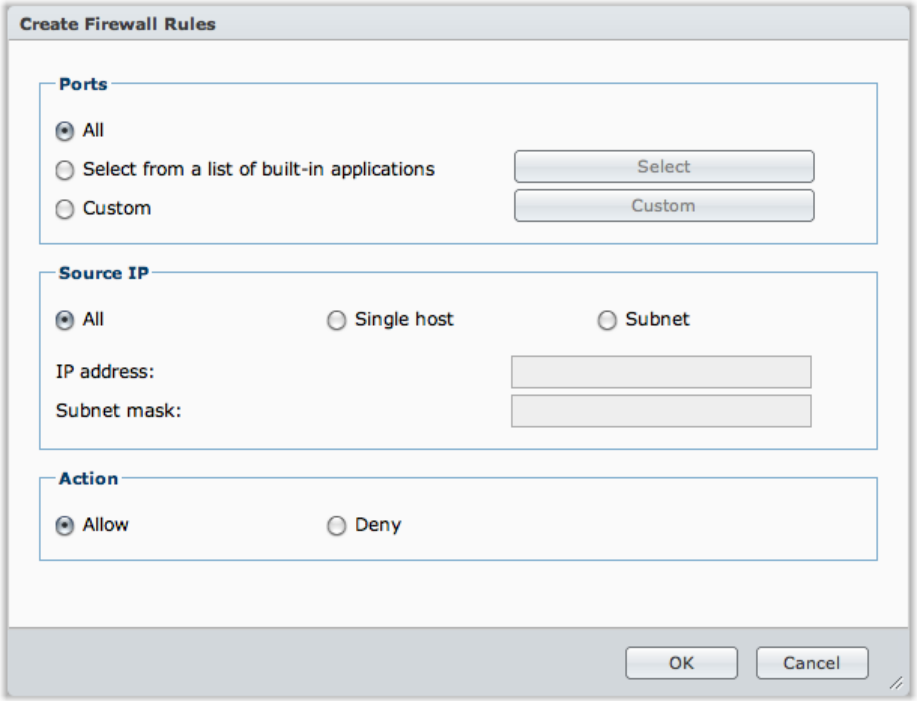
Enhance Internet Security

After your Synology DiskStation is available on the Internet, you will need to safeguard it against any attacks from Internet hackers.

This chapter explains how to set up firewall and enable auto block.

Prevent Unauthorized Connection with Firewall

The built-in firewall can prevent unauthorized logins, and control which services can be accessed. In addition, you can choose to allow or deny access to certain network ports from specific IP addresses.



Go to **Main Menu** > **Control Panel** > **Firewall** to create firewall rules.

> ***Note:*** You can create up to 100 rules for Synology DiskStation.

To create a firewall rule:

1. Click the **LAN**, **Bond** (multiple-LAN models only), **PPPoE**, or **Wireless** tab, depending on the type of your network connection.
2. Click **Create** to open the settings window.
3. Choose an option in the **Ports** section. You can apply the rule to all ports or selected ports using one of the following options:
   - **All**: Choose this option to apply the rule to all ports on Synology DiskStation.
   - **Select from a list of built-in applications**: Tick the system services that will be included in the rule.
   - **Custom**: Specify the type and protocol of the port, and enter the custom port number.

     You can enter up to 15 ports separated with comma, or by specifying a port range.

4 Specify the source IP address in the **Source IP** section. You can choose to allow or deny access from a particular source IP using one of the following options:
   - **All**: Choose this option to apply the rule to all source IP addresses.
   - **Single host**: Choose this option to apply the rule to an IP address.
   - **Subnet**: Choose this option to apply the rule to a subnet.
5 Choose **Allow** or **Deny** in the **Action** section to allow or deny the source IP address to access the specified ports.

Note:

- When you combine multiple LAN ports with link aggregation, firewall will apply the rules from the first network interface, and reserve the rules of the second network interface. For more information about link aggregation, see "LAN" on Page 19.[1]
- If your system has multiple network ports connecting to the same subnet, the firewall rules might not work properly.

To change the priorities of rules:

Reorder the rules by dragging any of them up or down. Rules at the top will have higher priorities.

To disable rules:

Uncheck the checkboxes next to the rules.

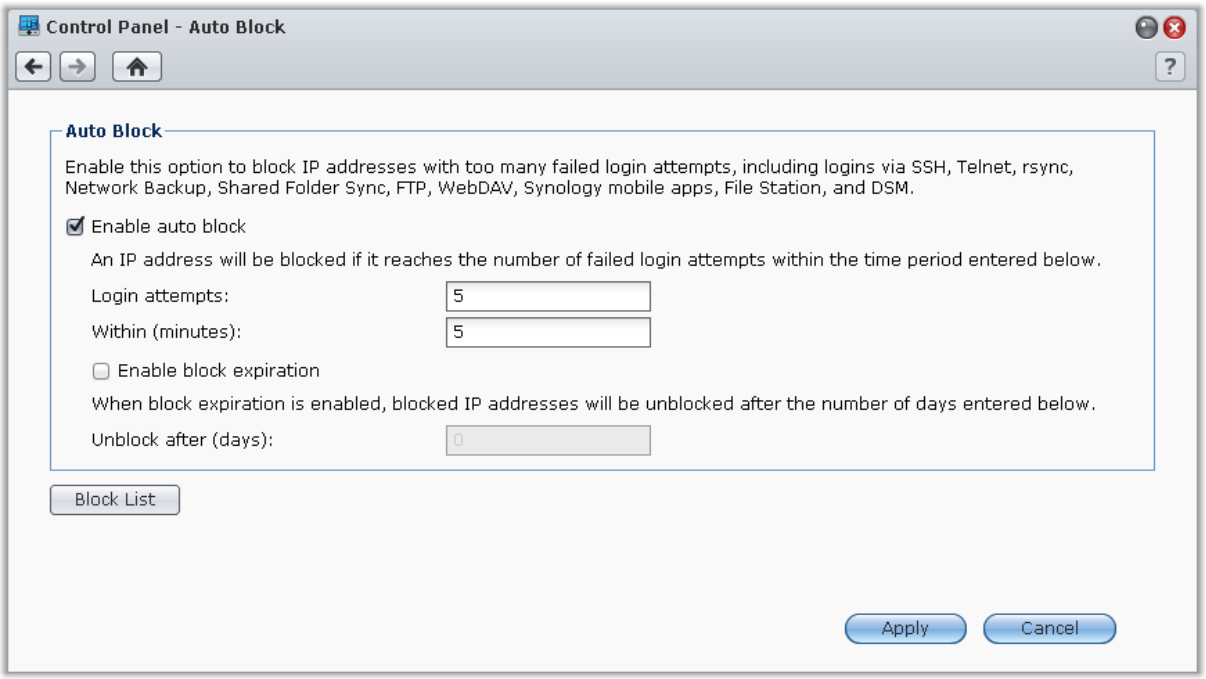
To delete rules:

Select the rules you want to delete and click **Delete**.

Automatically Block Suspicious Login Attempts

Auto block allows you to prevent unauthorized login. After enabling the service, an IP address will be blocked if it has too many failed login attempts. Failed login attempts via SSH, Telnet, rsync, Network Backup, Shared Folder Sync, FTP, WebDAV, Synology mobile apps, File Station, or DSM will all add up.

Go to **Main Menu** > **Control Panel** > **Auto Block** to manage auto block.


Control Panel - Auto Block
Auto Block
Enable this option to block IP addresses with too many failed login attempts, including logins via SSH, Telnet, rsync, Network Backup, Shared Folder Sync, FTP, WebDAV, Synology mobile apps, File Station, and DSM.
Enable auto block
An IP address will be blocked if it reaches the number of failed login attempts within the time period entered below.
Login attempts:
5
Within (minutes):
5
Enable block expiration
When block expiration is enabled, blocked IP addresses will be unblocked after the number of days entered below.
Unblock after (days):
Block List
Apply
Cancel

[1] Link Aggregation is supported on specific models only.

To enable auto block:

1 Tick **Enable auto block**.

2 Enter the following information to block an IP address with a number of failed login attempts within the specified minutes :

- **Login attempts**: The number for failed login attempts
- **Within (minutes)**: The number of minutes

3 Tick **Enable block expiration** and enter a number of days in the Unblock after (days) field if you want to unblock the IP address after the specified days.

> ***Note:*** The IP address will remain blocked if **Unblock after (days)** is set to **0**.

4 Click **Apply**.

To manage the blocked IP addresses:

1 Click **Block List** to check the blocked IP addresses.

2 If you want to remove an IP address from the block list, select the IP and click **Remove**.

3 Click **Finish**.

Chapter 7

Set Up File Sharing

File sharing is one of Synology DiskStation's major functions. Synology DiskStation can become the file sharing center within the Intranet or over the Internet, allowing users to access its files anytime and anywhere.

This chapter explains how to enable the support for file sharing protocols for all platforms, create and manage users and groups, set up shared folders, and allow or deny access to the shared folders, applications or subfolders from specific users or groups.

Enable File Sharing Protocols for All Platforms

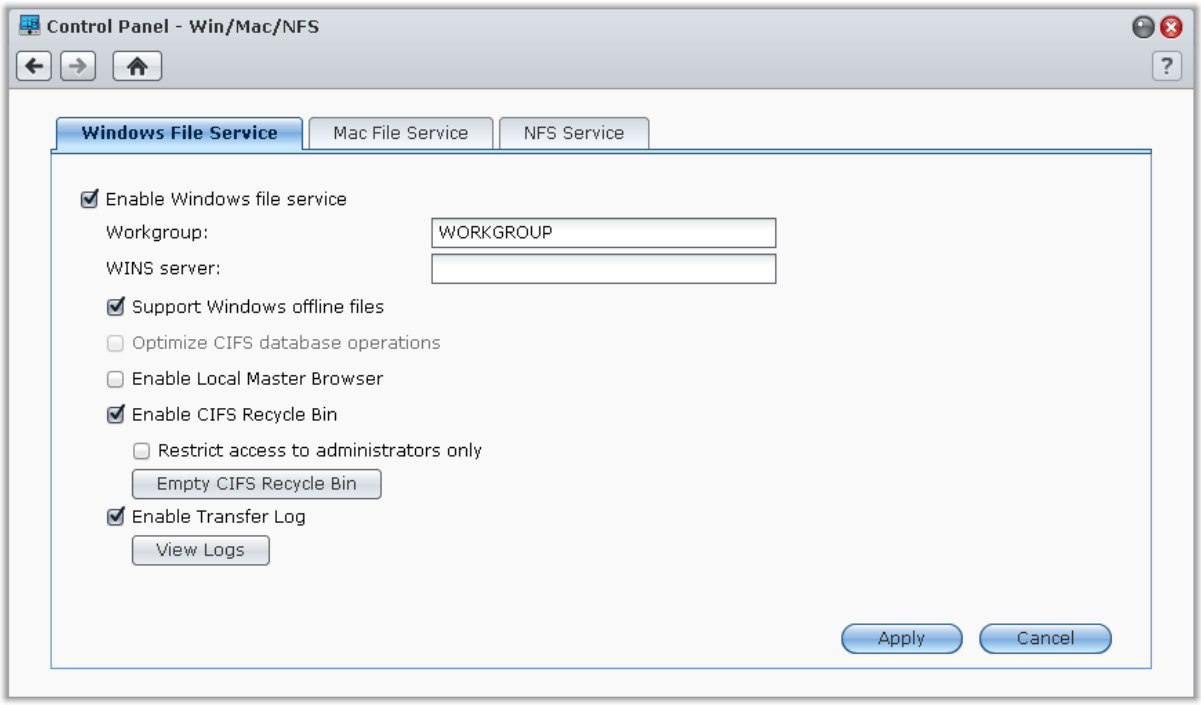
This section tells you how to enable Synology DiskStation to support file sharing protocols for all platforms.

Synology DiskStation supports the following file sharing protocols:

- **For Windows:** SMB/CIFS (My Network Places), FTP, WebDAV
- **For Mac:** SMB, FTP, AFP, WebDAV
- **For Linux:** SMB, FTP, NFS, WebDAV

Manage Windows File Service

Click the **Windows File Service** tab at **Main Menu** > **Control Panel** > **Win/Mac/NFS** to enable Synology DiskStation to be the Windows file server (CIFS server).



To enable Windows file service:

1 Tick **Enable Windows file service**.

2 Click **Apply**.

Advanced Settings

Workgroup

You can assign the system to be a member of a specific Workgroup for network management purpose.

Note:

- The name of a Workgroup can contain 1 to 15 characters. Invalid characters include: [ ] ; : " < > * + = \ / | ? ,
- If your workgroup name includes the character '&', users of Mac OS 10.4.4 or earlier versions will not be able to connect to Synology DiskStation via samba.

WINS Server

Microsoft Windows Internet Name Service (WINS) is a NetBIOS name- to-IP-address mapping service. Window users will locate the system more easily on TCP/IP networks if the system has been configured to register with a WINS server.

Support Windows offline files

This option will enable support for Windows offline files and automatically enables CIFS opportunistic locking. However, enabling this option will affect DiskStation performance when accessing shared folders via network.

Optimize CIFS database operations

Checking this option will disable "Opportunistic Locking" of CIFS, resulting in increased performance when database applications access database files on the shared folder of the Synology DiskStation via network.

Enable Local Master Browser

Enable Synology DiskStation to be the Local Master Browser.

Note: Enabling this function will disable the HDD hibernation mechanism and activate the guest account without password.

Enable CIFS Recycle Bin

Checking this option will enable "Recycle Bin" of CIFS, resulting in moving the deleted files into the CIFS Recycle Bin when users delete files in the shared folders via the CIFS protocol. When users delete files in a shared folder, a folder called "#recycle" will be created automatically under the root directory of the shared folder.

Empty CIFS Recycle Bin

Click **Empty CIFS Recycle Bin** to clean all CIFS Recycle Bins, resulting in deleting all contents of CIFS Recycle Bins in all the shared folders.

Enable Transfer Log

Enable this function to record the log of all file transfer via the smb protocol. After the function is enabled, you can see the log by clicking **View Logs**.

Manage Mac File Service

Click the **Mac File Service** tab at **Main Menu** > **Control Panel** > **Win/Mac/NFS** to make Synology DiskStation a Mac file server (AFP Server).

To enable Mac file service:

1 Tick **Enable Mac file service** checkbox to make Synology DiskStation a Mac file server (AFP server).

2 Set **AppleTalk Zone** or **Time Machine** backup folder if necessary. (See the sections below for more information.)

3 Click **Apply**.

More Information

About AppleTalk Zone:

A "Zone" is a logical grouping of devices in an AppleTalk network. If there are AppleTalk zones configured in your own network, the system will join the default zone automatically. You can also configure the system to join other available zones.

About Time Machine backup folder:

To backup data from Time Machine to Synology DiskStation, select a shared folder from the drop-down menu.

Shared folders that are being used for other services will not be available for Time Machine.

To enable Bonjour printer broadcast:

Tick **Enable Bonjour Printer Broadcast** to allow Mac clients to browse and locate the printer connected to Synology DiskStation.

Enable NFS Service for Linux Clients

Go to **Main Menu** > **Control Panel** > **Win/Mac/NFS** to allows Linux client to access DiskStation data.

To enable the NFS service:

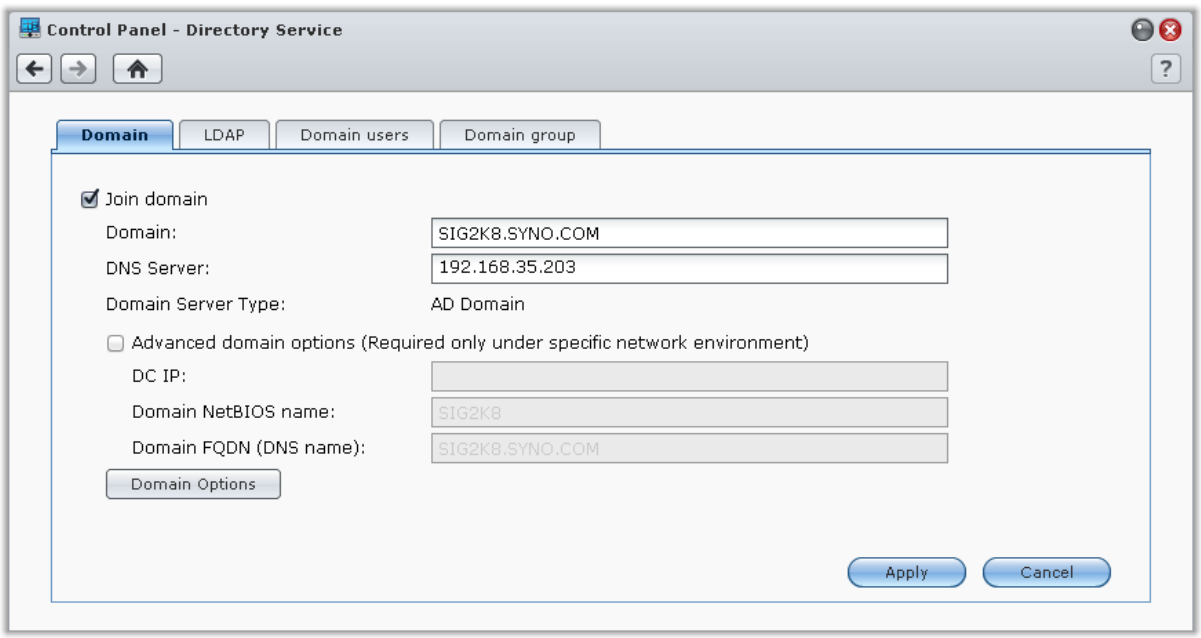
1 Tick **Enable NFS**.

2 Click **Apply**.

If you want to configure Linux client's NFS access privileges to the shared folders, see "Allow Users or Groups to Access Shared Folders" on Page 59 for more information.

Join DiskStation to Directory Service

Go to **Main Menu** > **Control Panel** > **Directory Service** to join your Synology DiskStation to a directory service as a Windows domain or LDAP client. When DiskStation is joined to a directory service, you can manage domain/LDAP users' access privileges to shared folders and DSM applications and enable their home service.



To join a Windows domain:

1 Click the **Domain** tab, enter the domain name in the **Domain** field and DNS server (optional) in the **DNS Server** field, and click **Apply**.

2 In the window that appears, enter the user name and password for the administrator of the domain server, and click **OK**.

After Synology DiskStation joins the domain, domain users can log in to Synology DiskStation with their domain account and password.

Note:

- If your domain user name includes "%" and "$", you might not be able to access your home folder. Please ask your domain administrator to give you a new user name.
- Domain groups **Domain Admins** and **Enterprise Admins** will be added to the local group **administrators** automatically. In other words, domain users in these groups have administrative right on the DiskStation, including performing DSM/CIFS/FTP/AFP/WebDAV applications.
- You can also configure domain users' access privileges to the shared folders on Synology DiskStation. See "Allow Domain Users or Groups to Access Shared Folders" on Page 60 for more information.

More Information

About DNS server:

You are recommended to specify a DNS server to help Synology DiskStation search for the domain. However, if the domain is not registered on the DNS server, the procedure of joining domain may fail.

About advanced domain options:

In most cases, you do not need to fill in any of the advanced domain option. Advanced domain options are needed only for specific domain environment.

- **DC IP**: Specify a DC (Domain Controller) IP and Synology DiskStation will try to communicate with it. If there is more than one IP, insert a comma in between each of them. Add an asterisk (*) after the last DC IP if you wish, and Synology DiskStation will try to communicate with other DC when all specified ones failed. You will need to add a comma between the asterisk and the last IP.
- **Domain NetBIOS name**: Specify the NetBIOS name of the domain.
- **Domain FQDN (DNS name)**: Specify the FQDN (DNS name) of the domain.

To bind DiskStation to an LDAP server:

1 Click the **LDAP** tab, and tick **Enable LDAP Client**.

2 Enter the IP address or domain name of the LDAP server in the **LDAP Server address** field.

3 Choose an encryption type from the **Encryption** drop-down menu to encrypt LDAP connection to the LDAP server.

4 Enter the Base DN of the LDAP server in the **Base DN** field.

5 To allow LDAP users to access DiskStation files via CIFS, tick **Enable Windows CIFS support**. For more information, click the Help button (with a question mark) at the top-right corner.

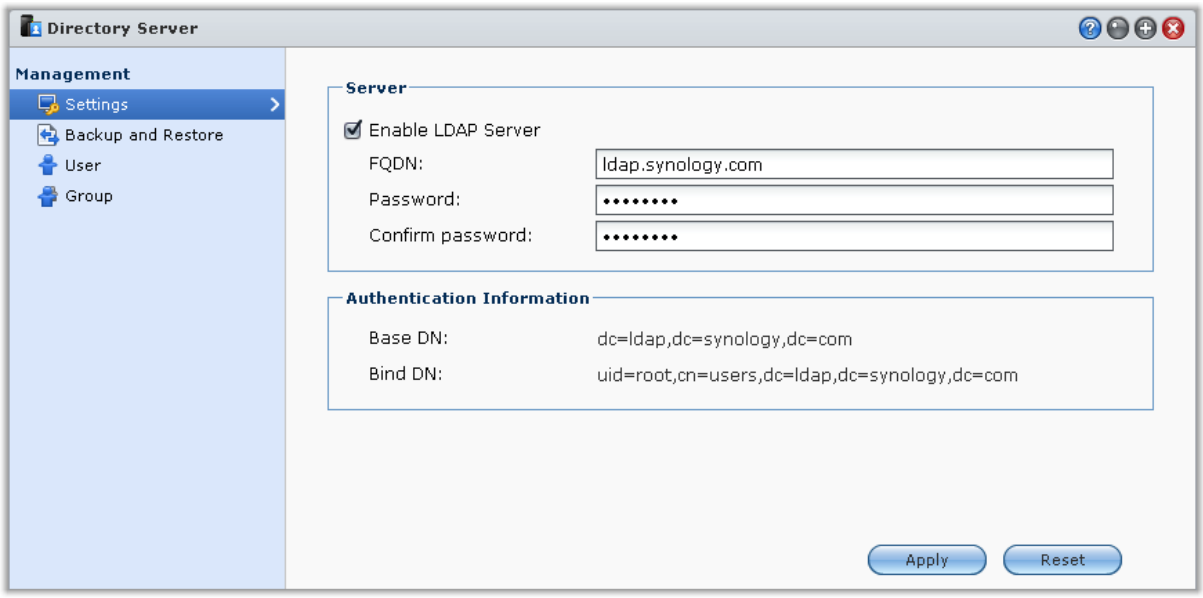
6 Click **Apply**.

7 Enter the Bind DN (or LDAP administrator account) and the password in the fields, and then click **OK**.

Note: The supported LDAP standard is LDAP version 3 (RFC2251).

Host LDAP Service with Directory Server

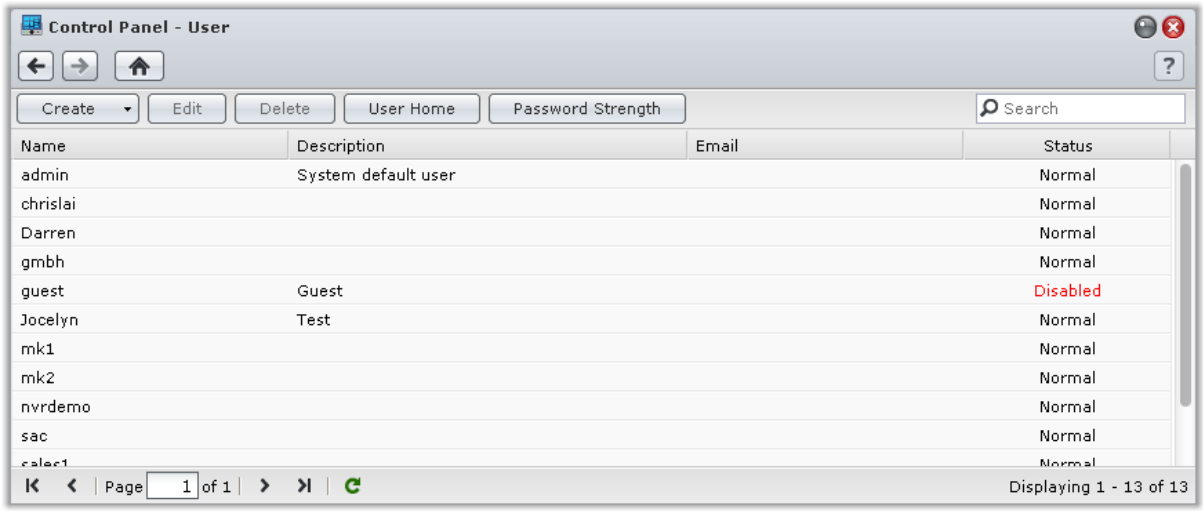
Directory Server is an add-on package based on LDAP version 3 (RFC2251) that allows your DiskStation to become an account administration center to centralize the account management of all connecting clients, and provides authentication service for them.



To install Directory Server on your DiskStation, go to **Main Menu** > **Package Center**. For more information about Directory Server, run and launch the package, and then click its **Help** button (with a question mark) at the top-right corner. To learn more about how to access DiskStation's Directory Server with a LDAP client, refer to the **Directory Server User's Guide** available at Synology's **Download Center**

Manage Users and Groups

Go to **Main Menu** > **Control Panel** > **User** or **Group** to create users or groups, and allow or deny their access to different shared folders.



Create and Edit Users

Follow the steps below to create a user account. The user can login to edit his/her account info after the user account has been established. You can also choose to set an account expiration date or disallow the user to change account password.

To create a user account:

1 Click **Create** to open the **User Creation Wizard**.

2 Enter the user name and other information, and click **Next**.

3 In the **Join Group** section, tick the checkboxes to select the user group for the user, and click **Next**. By default, the user is categorized under the **users** group.

> ***Note:*** For more information about groups, see "Create and Edit Groups" on Page 56.

4 In the **Assign Privileges – shared folder** section, do the following:

a Assign the following shared folder privileges for the user:

- **Read/Write**: The user can access and make changes to the files and subfolders in the shared folder.
- **Read only**: The user can access the files and subfolders in the shared folder, but cannot make changes to them.
- **No access**: The user cannot access the files and subfolders in the shared folder.

b See **Privilege preview** to see the user's privilege that is decided based on the privileges setting of the user and the groups joined by the user.

c See **Group privileges** for the shared folder privileges of the group the user belongs to.

> ***Note:***
>
> - When you encounter privilege conflicts, the privilege priority is as follows: **No access** > **Read/Write** > **Read only**.
> - For more information about editing a group's access privileges to shared folders, see "Allow Users or Groups to Access Shared Folders" on Page 59.

5 In the **User quota setting** section, do the following if you want to set the maximum storage quota for the user.

a Tick **Enable quota** and enter a value under the **Quota** column.

b Click **Next**.

6 In the **Assign Privileges – applications** section, assign the application privileges for this user, and click **Next**.

7 Click **Apply** to finish.

To create a user account by importing users list:

1 Create a text file which contains the following tab-delimited information in each line:

- Username
- Password
- Description
- Email
- Quota (MB) in volume 1
- Quota (MB) in volume 2 (and so on)

> ***Note:***
>
> - All fields are optional except **Username**.
> - An example of the text file is shown as follows:
>
> | | | | | |
> |---|---|---|---|---|
> | eddy | 1234 | father | eddy@abc.com | 80000 |
> | rosy | 5678 | mother | rosy@abc.com | 80000 |
> | chaddy | 8901 | brother | chaddy@abc.com | 20000 |
> | eric | 2345 | cousin | eric@abc.com | 20000 |

2 Save the text file in UTF-8 encoding.

3 Go to **Main Menu** > **Control Panel** > **User** and choose **Create** > **Import Users**.

4 Choose the text file and click **OK** to start uploading. Tick **Overwrite duplicate accounts** if you want to replace the existing duplicate accounts with the one from the users list.

After submission, a dialog will show the list of imported users.

> ***Note:*** Users with abnormal status will not be imported.

To edit a user:

1 Select the user you want to edit from the users list and click **Edit** or double-click the user.

2 Make changes to the settings and click **OK**.

> ***Note:***
> - If you disable an account, the account will stop functioning.
> - The quota value should be an integer greater than or equal to 0 GB, and less than the disk/volume capacity. A quota value of 0 means unlimited quota size.
> - If there is more than one volume on the server, you can set a quota for the user on every volume.
> - Email information on the "Notification" page must be set correctly in order for the system to notify the user by email after the account information has been created or modified.

To search for a user:

Type the name of the user in the **Search** field and press Enter (PC) or Return (Mac) on your keyboard. The search result will be displayed in the users list below.

This function is especially useful when there are numerous users for your Synology DiskStation.

To delete a user:

Select the user you want to delete and click **Delete**.

> ***Note:*** To see domain users in the users list, you must join the domain and assign shared folder privileges for the users. For more information about Windows ADS domain, see "Join DiskStation to Directory Service" on Page 50.

Apply Password Strength Rules

You can enable password strength service to make sure DSM users' password is secure enough to withstand malicious login attempt.

> ***Note:***
> - Password Strength rules only work for passwords created or modified after the Password Strength service is enabled. Existing passwords won't be affected by the rules.
> - The rules won't apply to the passwords of users created by importing users list.

To apply password strength rules:

1 Click **Password Strength**.

2 Tick **Apply password strength rules**.

3 Tick any of the following rules:

- **Exclude name and description of user from password**: The password must not contain user name or description.
- **Allow mixed case**: Mixed case letters are allowed in password.
- **Include numeric characters**: The password must contain at least one numeric character (0~9).
- **Include special characters**: The password must contain at least one special character (i.e., ~, `, !, @, #, $, %, ^, &, *, (,), -, _, =, +, [, {,], }, \, |, ;, :, ', ", <, >, /, ?).
- **Minimum password length**: The password must be longer than the specified value. The length should be a number between 6 and 127.

4 Click **Apply**.

To cancel password strength rules:

1 Click **Password Strength**.

2 Uncheck **Apply password strength rules**.

3 Click **Apply**.

Create User's Home Folder

Each DSM user (except for guest) can have his/her own folder called the **home** folder, which is accessible only by the user and the system administrator.

For DSM **admin** and users belonging to the **administrators** group, DSM users' home folders are here: **homes/[Username]**

To enable user home service:

1 Click **User Home**.

2 Tick **Enable user home service**.

3 If there are more than one volume on Synology DiskStation, select where you want the **homes** folder to be stored.

4 Click **OK**.

To disable user home service:

1 Click **User Home**.

2 Uncheck **Enable user home service**.

When the user home service is disabled, the **homes** folder will be kept but accessible by **admin** only. Users can access their home folders again if the user home service is enabled again.

Note:

- To delete the **homes** folder, the user home service must be disabled first.
- The domain user home service would be disabled if the local user home service is disabled.

Create Domain/LDAP User's Home Folder

If you have joined your DiskStation to a directory service as a Windows domain or LDAP client, you can go to **Main Menu** > **Control Panel** > **Directory Service** > **Domain users** or **LDAP user** to create domain/LDAP users' home folder.

To create the home folders for domain/LDAP users:

1 Click **User Home**.

2 Tick **Enable home service for domain users** or **Enable home service for LDAP users**.

3 Click **OK**.

For DSM **admin** or users belonging to the **administrators** group (including domain administrators), domain/LDAP users' home folders are in the folder named **@DH-domain name** (for domain users) or **@LH-FQDN name** (for LDAP users). The name of the user's home folder is the user account plus a unique number.

Like local users, all domain/LDAP users can access their own home folder via CIFS, AFP, FTP, WebDAV, or File Station.

admin and users belonging to the **administrators** group can access all personal folders located in the **homes** default shared folder.

Note:

- To delete the **homes** shared folder, user home service must be disabled first.
- Enabling domain/LDAP user home service will also enable the local user home service if it's not enabled yet.
- The domain user home service would be disabled if the local user home service is disabled.

Create and Edit Groups

Go to **Main Menu** > **Control Panel** > **Group** to create and edit a group, add users to the group, and then edit the group's properties, saving you the trouble of editing users one by one.

Groups created by default include the following:

- **administrators**: Users belonging to the **administrators** group have the same administrative privilege as **admin**.
- **users**: All users belong to the **users** group.

To create a new group:

1. Click **Create** and enter the group name and description.
2. Click **OK**.

To edit a group's name and description:

1. Select the group you want to edit from the groups list and click **Edit** or double-click the group.
2. Make changes to the settings and click **OK**.

To delete a group:

Select the group you want to delete from the groups list and click **Delete**.

To add or remove group members:

1. Select the group you want to add users to from the groups list and click **Edit Members**.
2. Click **Add** or **Remove**, select users from the users list, and click **OK**. (Press and hold Shift or Ctrl while making multiple selections.)
3. Click **Finish**.

> ***Note:*** For more information about editing a group's access privileges to shared folders or applications, see "Allow Users or Groups to Access Shared Folders" on Page 59 and "Allow Users to Access Applications" on Page 56 for more information.

Allow Users to Access Applications

Go to **Main Menu** > **Control Panel** > **Application Privileges** to decide which applications could be accessed by a user.

To quickly find the user whose application privileges you want to modify:

1. Click the **Local User** or **Domain User**, or **LDAP User** tab, depending on which type of users whose application privileges you want to modify.
2. Do any of the following:
   - Use the drop-down menus next to **Edit** to view users with or without access privilege to the specified application.
   - Enter the user's name in the search field and press "Enter" on your keyboard.
3. Wait for a while before the filter result is displayed.
4. Do any of the following if you want to see the complete users list:
   - Choose **Privilege includes** and **any** from the drop-down menus.
   - Delete the name you entered in the search field and press "Enter" on your keyboard.

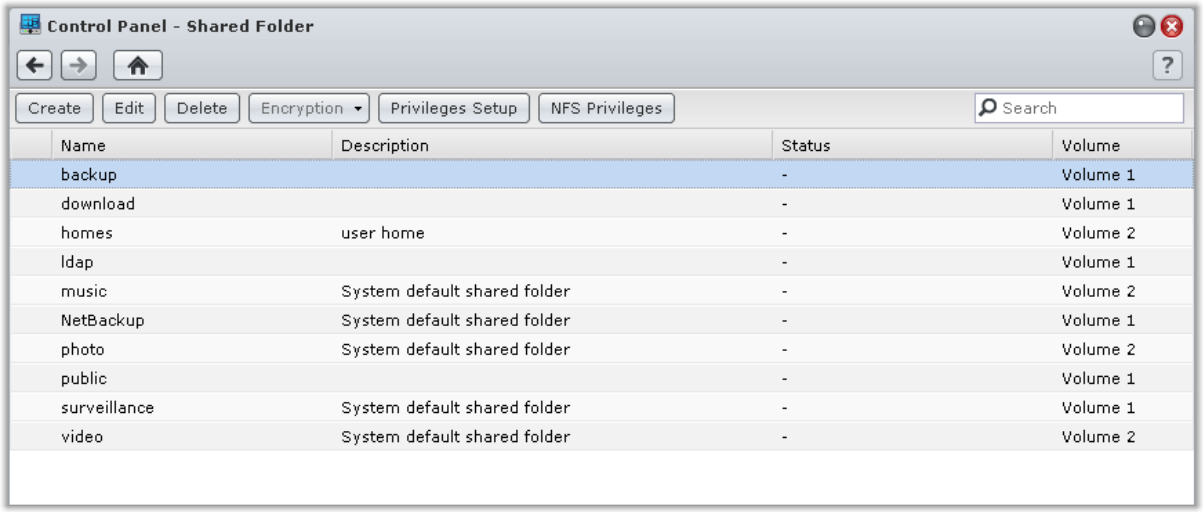
To allow a user to access applications for Synology DiskStation:

1. Click the **Local User**, **Domain User**, or **LDAP User** tab, depending on which type of users whose application privileges you want to modify.
2. From the users list, select the users whose application privileges you want to modify. (Press and hold Shift or Ctrl while making multiple selections.)
3. Click **Edit** and tick the checkboxes to grant access to the applications. You can also tick **Grant** to grant access to all applications.
4. Click **OK**.

Note: The users list excludes **admin** and **guest**.

Set Up Shared Folders

Go to **Main Menu** > **Control Panel** > **Shared Folder** to manage the shared folders, which are the root folders of Synology DiskStation. (Folders within the shared folders are called **subfolders**.) You can store data in the shared folders and share them with users or groups with access privileges.



Built-in Shared Folders Created by the System

System built-in shared folders are created when the services or applications requiring the folders are enabled.

System built-in shared folders include the following:

Name	Description
public	The **public** folder will be created automatically after the first time you set up Synology DiskStation.
web	The **web** folder contains contents of your website. It will be created automatically when Web Station is enabled. For more information about Web Station, see "Use Web Station to Host Websites" on Page 84.
photo	The **photo** folder contains photos and videos you want to share on Photo Station. It will be created automatically when Photo Station or DLNA/UPnP Media Server is enabled. For more information about Photo Station and Media Server, see "Chapter 12: Share Photos, Videos, and Blogs with Photo Station" on Page 95 and "Manage DLNA Media Server" on Page 142.
music	The **music** folder contains music you want to share on Audio Station. It will be created automatically when Audio Station is enabled. For more information about Audio Station, see "Chapter 13: Play Music with Audio Station" on Page 105.
video	The **video** folder contains videos you want to browse through DLNA/UPnP DMA. It will be created automatically when Media Server is enabled. For more information about Media Server, see "Manage DLNA Media Server" on Page 142.
surveillance	The **surveillance** folder contains Surveillance Station recordings. It will be created automatically when Surveillance Station is enabled. It is read-only and can only be accessed by the system administrator. For more information about Surveillance Station, see "Chapter 15: Safeguard Your Environment with Surveillance Station" on Page 130.
home	The **home** folder provides a private space for each user to store data where only the user can access. It will be created automatically when User Home is enabled. For more information about User Home, see "Create User's Home Folder" on Page 55.
homes	The **homes** folder contains the home folders of all users. It will be created automatically when User Home is enabled. Only system administrator can access and manage all users' home folders. For more information about User Home, see "Create User's Home Folder" on Page 55.

Name	Description
NetBackup	The **NetBackup** folder is created automatically when Network Backup Service is enabled. For more information about network backup, see "Network Backup" on Page 78.
usbshare	The **usbshare[number]** folder is created automatically when you connect an USB disk to Synology DiskStation's USB port. For more information about external USB disks, see "Manage External Disks" on Page 38.
esatashare	The **esatashare** folder is created automatically when you connect an eSATA disk to Synology DiskStation's eSATA port. For more information about external eSATA disks, see "Manage External Disks" on Page 38.

Create a Shared Folder

If you are **admin** or a user belonging to the **administrators** group, you can also create shared folders and assign access privileges to the folders.

To create a new shared folder:

1 Click **Create**.

2 Enter the name and description for the shared folder, and select a volume[1] where the folder will be created.

3 Tick **Hide this shared folder in "My Network Places"** if you want to hide the folder in Windows "My Network Places".

> ***Note:*** If you have access privilege to a shared folder hidden in "My Network Places", you can still access it by pressing Windows-R and entering **\\Synology_Server_Name\Shared_Folder_Name** in the **Open** field.

4 If you want to encrypt the shared folder, do the following:

- **a** Tick **Encrypt this shared folder** in the window that appears, enter and confirm the encryption key, and then choose the size of the AES encryption key in the **Encryption key size(bit)** field.
- **b** Tick **Mount automatically on startup** to mount the encrypted folder automatically for access. If you didn't tick this checkbox, the encrypted folder will be unmounted next time Synology DiskStation restarts. To view or access an unmounted folder, you will need to mount the folder manually by importing or entering the encryption key.

5 If you want to define Windows ACL privileges for the shared folder, click the **Windows ACL** tab. See "Define Windows ACL Privileges for Shared Folder" on Page 61 for more information.

6 If you want to index contents within this shared folder, click the File Indexing tab. See "Index Shared Folder Contents" on Page 62 for more information.

7 Click **OK**.

> ***Note:*** One Synology DiskStation can contain up to 100 or 200[2] shared folders, including the built-in shared folders.

Remove a Shared Folder

If you are **admin** or a user belonging to the **administrators** group, you can remove any shared folder created by yourself.

To remove a shared folder:

1 Select the shared folder you want to remove from the shared folder list.

2 Click **Delete**, and tick the checkbox on the dialogue prompt for confirmation.

3 Click **OK**.

> ***Important:*** Removing any shared folder also removes all data within it. If you still need the data, back them up first.

---

[1] Multiple volumes are available only on DiskStation with more than 1 bay.

[2] 200 shared folders are supported on specific models only. Visit **www.synology.com** for more information.

Allow Users or Groups to Access Shared Folders

Go to **Main Menu** > **Control Panel** > **Shared Folder** to allow or deny users' or groups' access to the shared folders.

To allow users or groups to access a shared folder:

1. Select the shared folder you want to edit from the shared folders list, and click **Privileges Setup** to open the settings window.
2. Click the **Privilege Setup** tab, and select any of the following from the drop-down menu:
   - **System Internal user**: Anonymous FTP user. Before allowing anonymous FTP users to connect to a shared folder, you need to allow their access to the folder first.
   - **Local users**: Synology DiskStation users (including **guest**). See "Create and Edit Users" on Page 53 for more information.
3. Tick or uncheck the following privileges to assign access privileges for the users or groups:
   - **Read/Write** (RW): The user or group can access and make changes to the files and subfolders in the shared folder.
   - **Read only** (RO): The user or group can access the files and subfolders in the shared folder, but cannot make changes to them.
   - **No access** (NA): The user or group cannot access the files and subfolders in the shared folder.

   Note: To set the access privileges to subfolders, you can use File Station. See "View or Change File or Folder Permissions" on Page 74 for more information.
4. Click the **Advanced privileges** tab if you want to do any of the following:
   - Disable directory browsing
   - Disable modification of existing files
   - Disable file downloading
5. Click **OK**.

Note:

- When you encounter privilege conflicts, the privilege priority is as follows: **No access** > **Read/Write** > **Read only**.
- When you create a new shared folder, if the access privilege of **admin** (or a user belonging to the **administrators** group) to the folder is set as **No access**, then **admin** (or the user belonging to the **administrators** group) will only be able to see the folder by going to **Main Menu** > **Control Panel** > **Shared Folder**.

To allow Linux clients to access a shared folder:

1. Select the shared folder you want to edit from the shared folder list, and click **NFS Privileges**.
2. Click **Create** to open the settings window.
3. Enter a **Hostname or IP**. You may specify a host in three ways:
   - **Single Host:** The FQDN (fully qualified domain name) or an IP address.
   - **Wildcards:** *,* .synology.com
   - **IP networks:** 203.74.205.32/255.255.252.0, /24
4. Assign **Privilege**, assign **Root Squash**, or tick **Enable asynchronous**, and click **OK**.
5. Click **OK**.

Term Explanation
Asynchronous: NFS servers will reply to requests before the changes on the file are completed.

Allow Domain Users or Groups to Access Shared Folders

If you have joined your DiskStation to a directory service as a Windows domain or LDAP client, you can go to **Main Menu** > **Control Panel** > **Directory Service** > **LDAP User**, **LDAP Group**, **Domain users**, or **Domain Group** to set up and modify the shared folder privileges of a domain/LDAP user or group.

To manage domain/LDAP users or groups' shared folder privileges:

1. Select the user or group you want to edit, and then click **Edit**.
2. Tick the checkboxes to manage the shared folder privileges. If you are editing the shared folder privileges of a user, you can see the user's actual privilege under the **Preview** column.

> ***Note:*** In the event of privilege conflicts, the privilege priority will be: No access (NA) > Read/Write (RW) > Read only (RO).

3. Click **OK**.

Encrypt a Shared Folder

Go to **Main Menu** > **Control Panel** > **Shared Folder** to encrypt your shared folder. [1]

The AES 256-bit encryption can block off all unauthorized access attempts. Without the encryption key, other people will not be able to use the encrypted data even if they remove the hard drives from your Synology DiskStation and mount it on their device.

To encrypt a shared folder:

1. Select a shared folder you want to encrypt, and then click **Edit** to open the settings window.
2. Tick **Encrypt this shared folder**, enter the encryption key in the **Encryption key** field, and enter the same key again in the **Confirm key** field.
3. Choose the size of the AES encryption key from the **Encryption key size (bit)** drop-down menu.
4. Tick **Mount automatically on startup** to mount the encrypted folder automatically after Synology DiskStation starts up next time. By default, encrypted shared folder will be unmounted automatically on startup for security reasons.

> ***Note:***
>
> - You can also encrypt a folder when you create it.
> - The following built-in shared folders are not allowed for encryption since they are associated with system services: web, photo, music, video, surveillance, download, Netbackup.
> - Encrypted shared folders cannot be accessed via NFS. If you encrypt a shared folder containing NFS rules, they will be removed.

Edit an Encrypted Folder

After the folder is encrypted, you can use the **Encryption** drop-down menu to edit the folder.

The items shown in the menu depend on the status of the selected shared folder:

- **For unencrypted shared folder,** the **Encryption** drop-down menu is disabled.
- **For an encrypted shared folder which is mounted,** you can choose **Unmount** from the **Encryption** drop-down menu to unmount the folder, or **Export key** to save the encryption key.
- **For an encrypted shared folder which is unmounted,** you can choose **Mount** from **Encryption** drop-down menu, and then enter or import the encryption key to mount the folder for access.

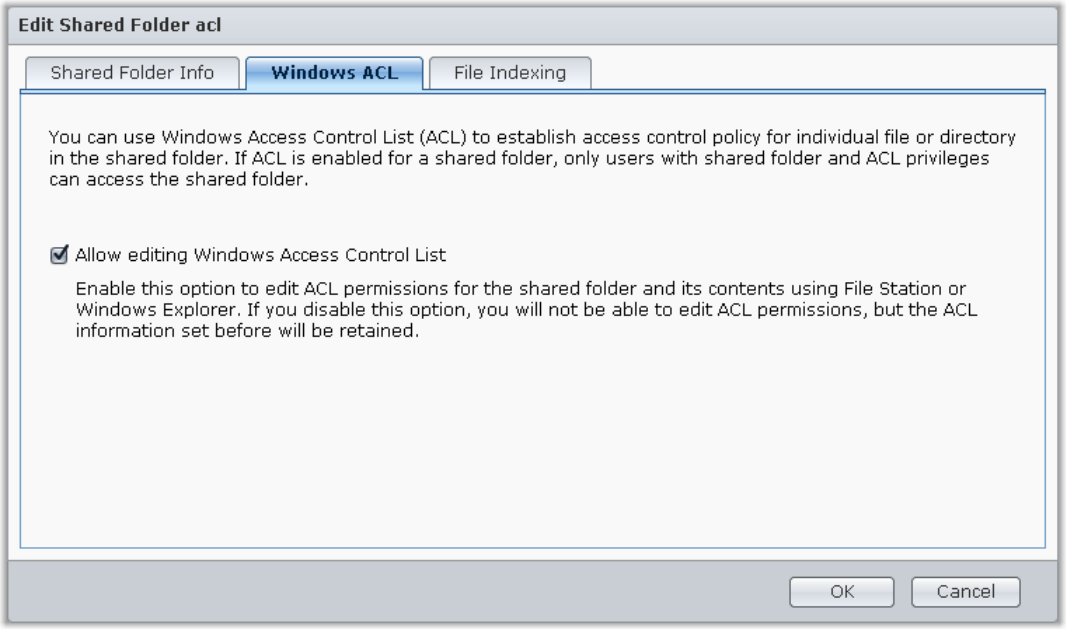
> ***Note:***
>
> - **It is very important to remember the encryption key.** It is strongly recommended that you export and save the encryption key. If you forget or lose the key, there is no way to rescue the encrypted data.
> - If an encrypted folder is unmounted, you cannot rename it or change its volume location.

[1] Shared folder encryption is supported on specific models only.

Define Windows ACL Privileges for Shared Folder

Go to **Main Menu** > **Control Panel** > **Shared Folder** to define ACL privileges for a shared folder. Windows Access Control List (ACL) is a list of privileges or permissions that determine specific access rights under the Windows environment. This can help administrator define access control rules for an individual file or a directory, and give different access rights for individual user or group.

Through Windows ACL, you can assign different privileges to local and domain users in the system. The privileges apply to all file-related applications, such as FTP, File Station, NFS, AFP, WebDAV, etc.


Edit Shared Folder acl
Shared Folder Info
Windows ACL
File Indexing
You can use Windows Access Control List (ACL) to establish access control policy for individual file or directory in the shared folder. If ACL is enabled for a shared folder, only users with shared folder and ACL privileges can access the shared folder.
Allow editing Windows Access Control List
Enable this option to edit ACL permissions for the shared folder and its contents using File Station or Windows Explorer. If you disable this option, you will not be able to edit ACL permissions, but the ACL information set before will be retained.
OK
Cancel

To define Windows ACL settings for a shared folder:

1 Go to **Main Menu** > **Control Panel** > **Shared Folder**.

2 Click **Create** to create a shared folder, or select an existing shared folder and click **Edit** to edit the folder.

3 Under the **Shared Folder Info** tab, enter the fields required.

4 Under the **Windows ACL** tab, click **Allow editing Windows Access Control List**.

5 Click **OK** to finish.

To edit Windows ACL settings using File Station:

Go to **Main Menu** > **DSM Help**, and then go to **Control Panel** > **Shared Folder** > **Windows ACL** for detailed instructions.

To edit Windows ACL settings using Windows Explorer:

Refer to the **How To** article for detailed instructions.

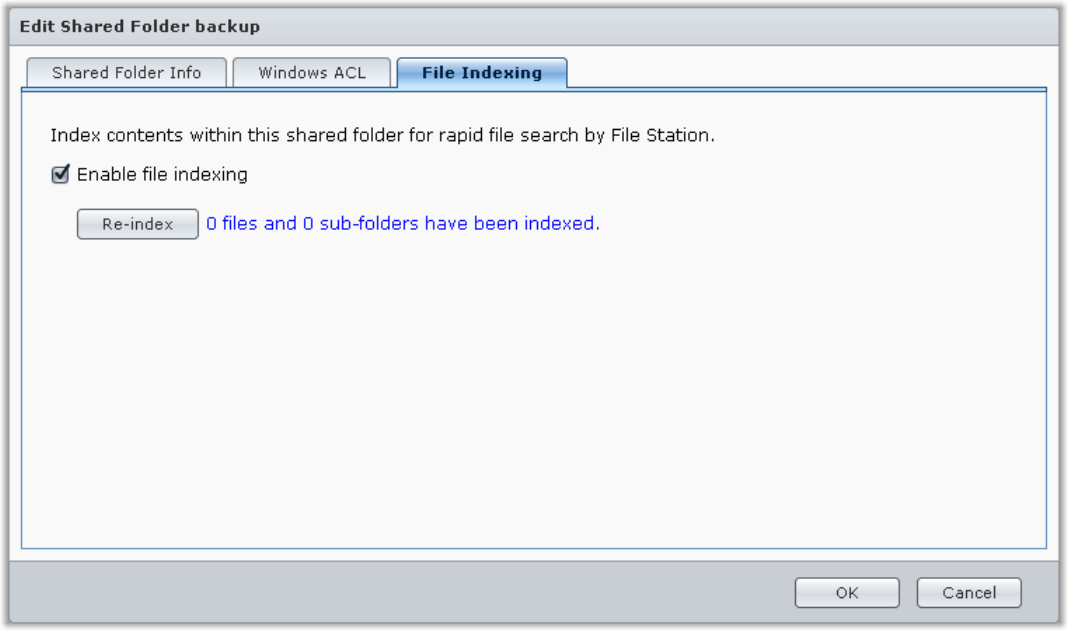
When there's a conflict between Windows ACL settings and the shared folder privileges, the system will automatically adopt the settings the two may have in common. For example, if the shared folder privilege is "Read/Write", but ACL privilege is "Read". Then final privilege will be only be "Read".

Note:

- You can only add up to 200 ACL explicit permission entries for a file or folder.
- Windows ACL is only supported on EXT4 file system. For previous DSM 2.3 users, you need to create at least one EXT4 volume to use ACL feature. This means, you have to format at least one hard disk and re-create a volume. **Formatting DiskStation will result in erasing all stored data and settings. Please make sure all your data is backed up before processing.**
- To define new privileges for domain users, make sure DSM and Windows clients are in the same domain.
- The ACL privileges of the following shared folders cannot be modified: **photo**, **surveillance**, **web**, **homes**, **NetBackup**, **usbshare**, **sdshare**, **esatashare**.

Index Shared Folder Contents

You can index the contents of a shared folder for rapid file search by File Station.



To index files in a shared folder:

1 Select the shared folder you want to index.

2 Click **Edit** and then click the **File Indexing** tab.

3 Tick **Enable file indexing**.

4 Click **OK**.

> ***Note:*** See "Search for Files or Folders" on Page 70 for more information about searching files with File Station.

Chapter 8

Access Files from Anywhere

When you have set up users or groups with proper access privileges to the shared folders, they can share their files with your Synology DiskStation from anywhere.

This chapter explains the ways to access the Synology DiskStation shared folders within the Intranet or over the Internet.

Access Files within the Intranet

This section explains how to allow users to use Windows, Mac, or Linux computer to access shared folders on Synology DiskStation within the Intranet.

> ***Note:*** Before accessing, make sure the relative file sharing protocols have been enabled for your Synology DiskStation. See "Enable File Sharing Protocols for All Platforms" on Page 48 for more information.

Access Shared Folders from Windows

To access shared folders from Windows, you can use any of the following methods.

Method 1: Use Synology Assistant to map the shared folders as network drives.

1 Run Synology Assistant and select the server from the server list.

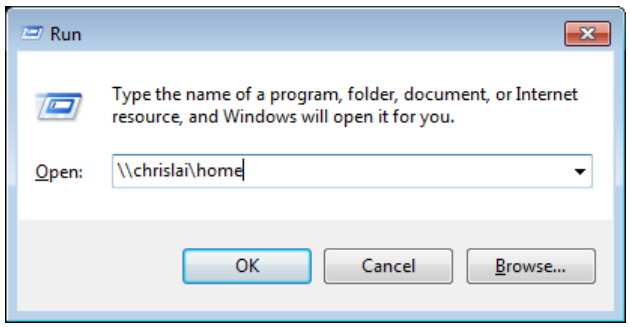
2 Click **Map Drive** and follow the onscreen steps to finish the setup.

Upon completion, you can access the mapped shared folder directly in Windows Explorer.

Method 2: Use the Run window.

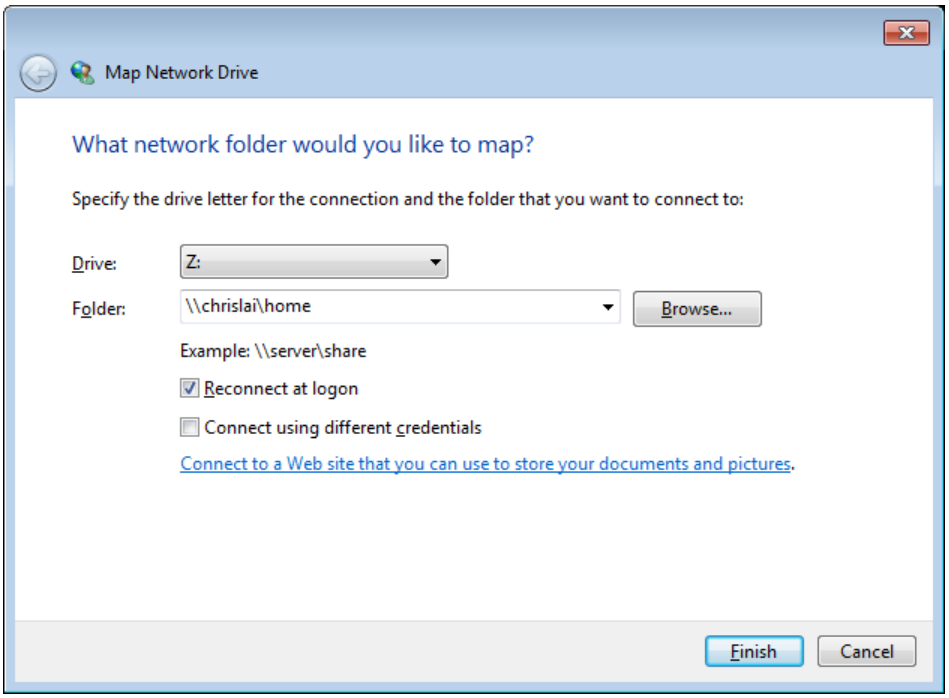
1 Press Windows-R to open the **Run** window.

2 Enter **\\Synology_Server_Name\Shared_Folder_Name** in the **Open** field.



Method 3: Use Windows Explorer.

1 Open a Windows Explorer window and choose **Tools** > **Map network drive** to show the **Map Network Drive** window.


Map Network Drive
What network folder would you like to map?
Specify the drive letter for the connection and the folder that you want to connect to:
Drive:
Z:
Folder:
\\chrislai\home
Browse...
Example: \\server\share
Reconnect at logon
Connect using different credentials
Connect to a Web site that you can use to store your documents and pictures.
Finish
Cancel

2 Choose a drive number from the **Drive** drop-down menu.

3 Locate the shared folder by doing one of the following:

- Enter **\\Synology_Server_Name\Shared_Folder_Name** in the **Folder** field.
- Click **Browse** to locate the shared folder, and then click **OK**.

4 Click **Finish**.

5 Enter your user name and password for Synology DiskStation Manager and click **OK**.

Upon completion, you can access the mapped shared folder directly in Windows Explorer.

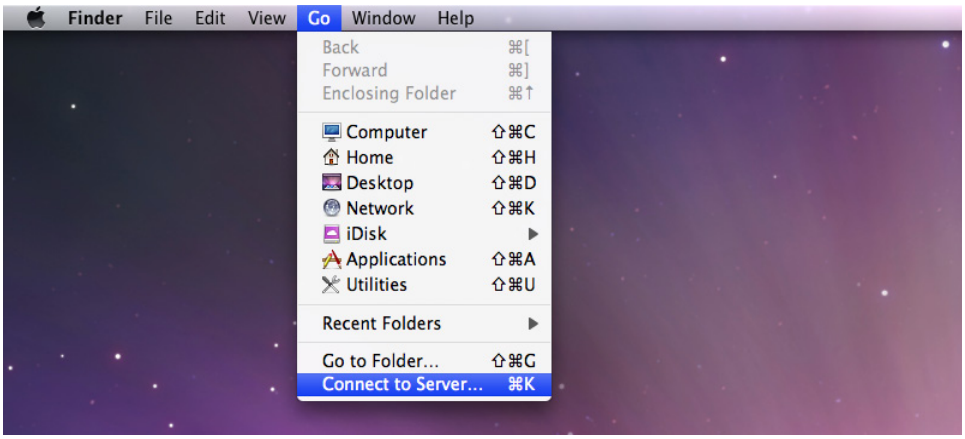
Access Shared Folders from Mac

1 Choose **Go** > **Connect to Server** from the menu bar.

2 Type Synology DiskStation's IP address or server name (appended with **.local**) preceded by **smb://** or **afp://** in the **Server Address** field and click **Connect**. (e.g. **smb://EricaWang.local** or **afp://192.168.0.2**)

> ***Note:*** For better performance, it is recommended that you connect to the shared folders via SMB.

3 Select the shared folder you want to access. Upon completion, you can access the shared folder in the Finder window.



Access Shared Folders from Linux

1 In Synology DiskStation Manager, Go to **Main Menu** > **Control Panel** > **Shared Folder**.

2 Select the shared folder you want to access, click **NFS Privileges**, and find the mount path at the bottom of the window that appears.

> ***Note:*** for more information about NFS Privileges, see "Allow Users or Groups to Access Shared Folders" on Page 59.

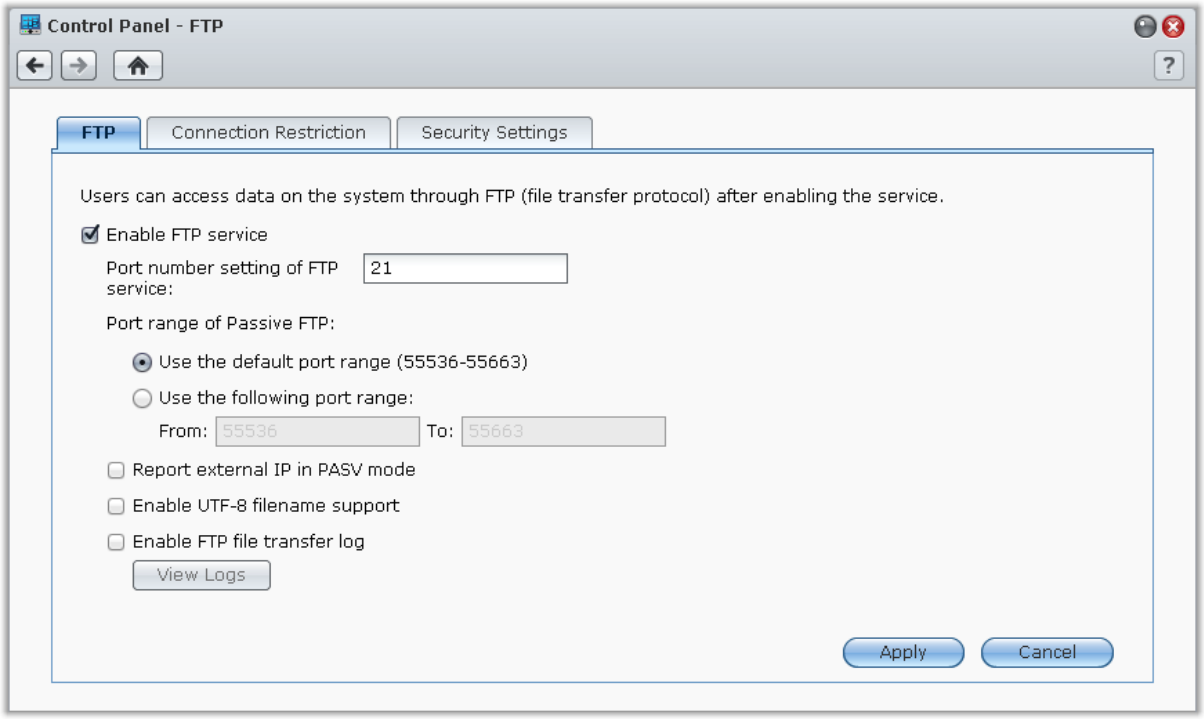
3 On a Linux computer, enter the mount path to mount the shared folders.

Access Files via FTP

If your Synology DiskStation is accessible over the Internet, you can use a FTP application to access the shared folders.

> ***Note:*** For more information about making Synology DiskStation accessible over the Internet, see "Chapter 5: Access your DiskStation from the Internet" on Page 40.

Go to **Main Menu** > **Control Panel** > **FTP** to enable FTP service, allowing users to upload or download Synology DiskStation data via FTP.



To enable FTP service:

1 Tick **Enable FTP service**.

2 Set the port number and the port range of Passive (PASV) FTP.

3 Click **Apply**.

For more information about managing the FTP service, click the **Help** button (with a question mark) at the top-right corner.

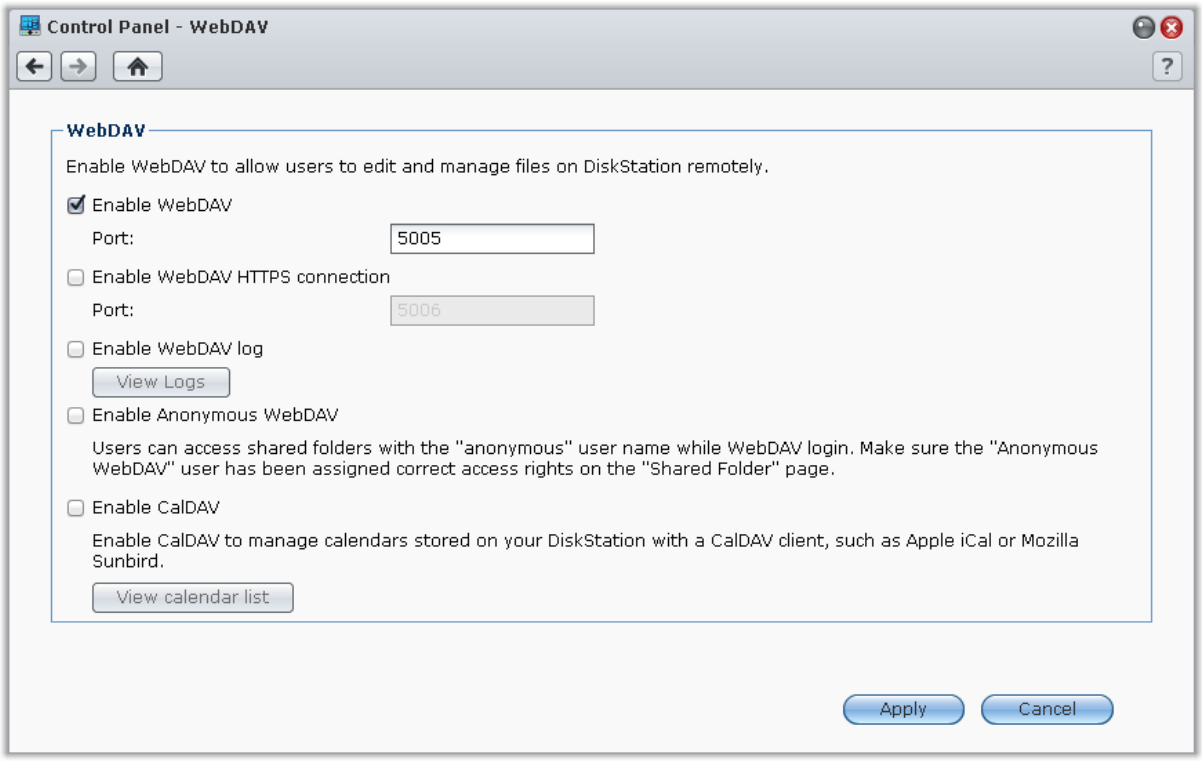
Connect to Synology DiskStation Using a FTP Application

Open any FTP application on your computer and enter the following information to connect to Synology DiskStation:

- Synology DiskStation's IP address or domain name
- Your user account and password
- The port number (The default number is 21)

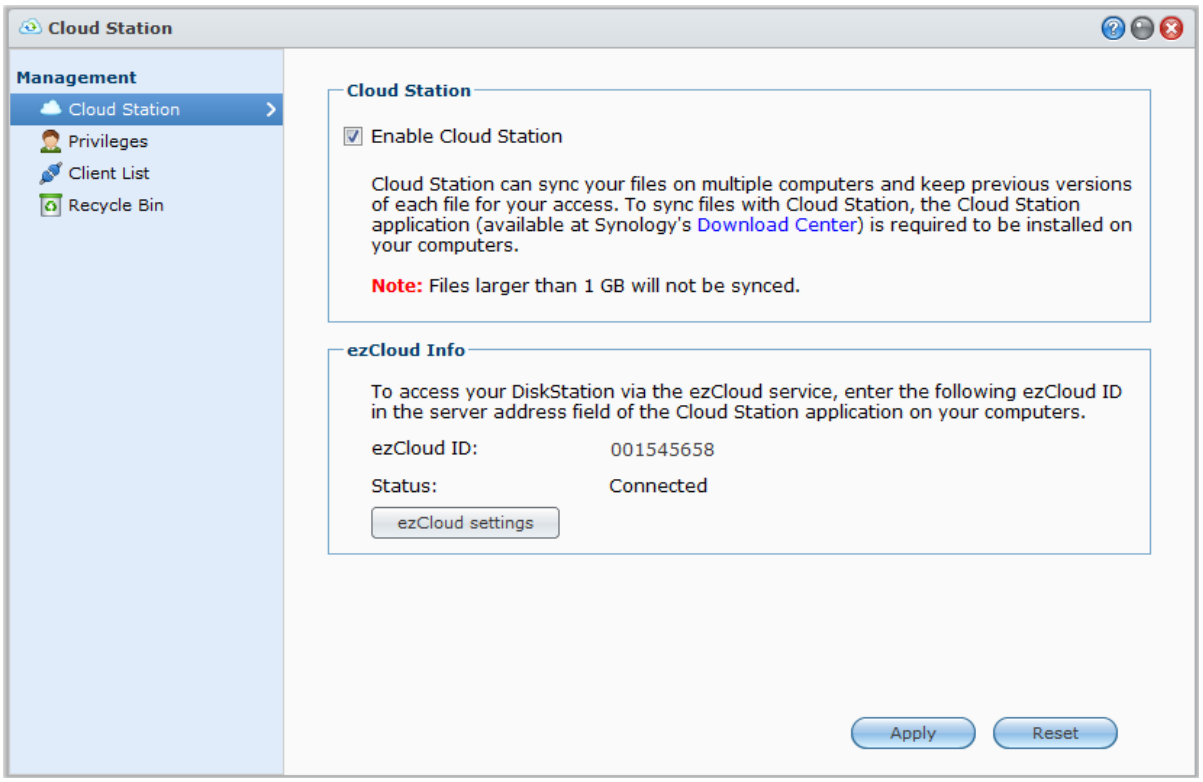
Access Files via WebDAV

By enabling WebDAV or CalDAV (at **Main Menu** > **Control Panel** > **WebDAV**), you can remotely manage and edit files or calendars stored on DiskStation. For more information, click the **Help** button (with a question mark) at the top-right corner.


Control Panel - WebDAV
WebDAV
Enable WebDAV to allow users to edit and manage files on DiskStation remotely.
Enable WebDAV
Port:
5005
Enable WebDAV HTTPS connection
Port:
5006
Enable WebDAV log
View Logs
Enable Anonymous WebDAV
Users can access shared folders with the "anonymous" user name while WebDAV login. Make sure the "Anonymous WebDAV" user has been assigned correct access rights on the "Shared Folder" page.
Enable CalDAV
Enable CalDAV to manage calendars stored on your DiskStation with a CalDAV client, such as Apple iCal or Mozilla Sunbird.
View calendar list
Apply
Cancel

Sync Files via Cloud Station

Cloud Station is a file sharing service that allows your DiskStation to become a file sync center to sync files between multiple client computers.


Cloud Station
Management
Cloud Station
Privileges
Client List
Recycle Bin
Cloud Station
Enable Cloud Station
Cloud Station can sync your files on multiple computers and keep previous versions of each file for your access. To sync files with Cloud Station, the Cloud Station application (available at Synology's Download Center) is required to be installed on your computers.
Note: Files larger than 1 GB will not be synced.
ezCloud Info
To access your DiskStation via the ezCloud service, enter the following ezCloud ID in the server address field of the Cloud Station application on your computers.
ezCloud ID: 001545658
Status: Connected
ezCloud settings
Apply
Reset

Note: A client application (Cloud Station for computer clients, available at Synology's **Download Center**) is required to be installed on client computers before syncing files with DiskStation.

To install and run Cloud Station on your DiskStation:

Go to **Main Menu** > **Package Center** to install and run the Cloud Station package.

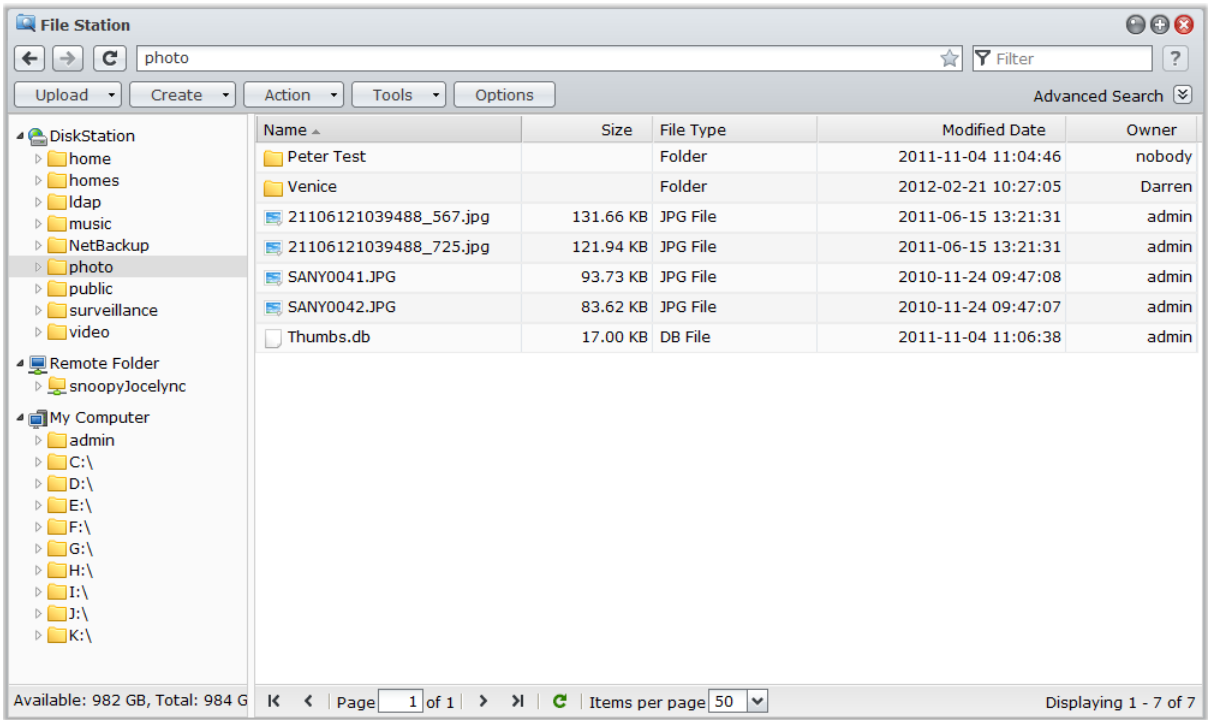
To launch Cloud Station:

Go to **Main Menu** > **Cloud Station**.

For more information about Cloud Station, run and launch the package, and then click its **Help** button (with a question mark) at the top-right corner.

Access Files via File Station

File Station is DSM's file management tool, allowing DSM users over the Internet to access DiskStation folders with their web browsers. By launching two or more File Stations, you can manage all your DiskStation data by dragging and dropping them between different File Stations.



File Station Requirement

To use the full featured File Station, you will need the newest web browser, Java and Flash Player.

- **Browser:** IE 8 or later, Firefox 3.6 or later, Safari 5.0 or later, Chrome; with JavaScript enabled
- **Java (For browsing folders on the local computer):** Java Runtime Environment (JRE) 5 or later
- **Flash:** Flash Player 9.0.28 or later

File Station Appearance

Go to **Main Menu** > **File Station** to open a **File Station** window.

- **Left panel:** Displays Synology DiskStation's shared folders and their subfolders in the upper part, and the folders on your local computer in the lower part.
- **Main section:** Displays contents of the currently-selected folder.
- **Help button (top-right corner):** Click the **Help** button (with a question mark) to reveal the DSM Help, where you can get useful help about how to use File Station.
- **Search field (next to the Help button):** Enter a keyword to filter through files or folders in the current folder.
- **Advanced Search (downward arrow below the Help button):** Search for refined search results.

Manage File Station Options

Click **Options** to manage the following File Station options.

General

Here you can enable File Station log to record the activities of all users. The user activities include **Create folder**, **Upload**, **Download**, **Delete**, **Rename**, **Move**, **Copy** and **Property set**.

To enable File Station log:

1 If you want to record the activities of all users, tick **Enable File Station log**.

2 Click **OK**.

To see the File Station log:

1 Click **View Logs**, which will lead you to **Main Menu** > **System Information** > **Log**.

2 Choose **File Station** log from the drop-down menu.

Mount

By default, all users can mount remote folders or virtual drives. Here you can limit the access to remote folder or virtual drive management to administrators only.

> ***Note:*** Non-administrator users can only mount remote folders within their home folder.

To determine who can mount remote folders or virtual drives:

1 Choose **All users** or **Administrators** in the **Remote Folder** or **Virtual Drive** section.

2 Click **OK**.

> ***Note:*** For more information about remote folders or virtual drives, see "Mount Remote Folders or Virtual Drives" on Page 75.

Shared Links

By default, all users can share file links. Here you can limit the access to shared links management to administrators only.

To determine who can share file links:

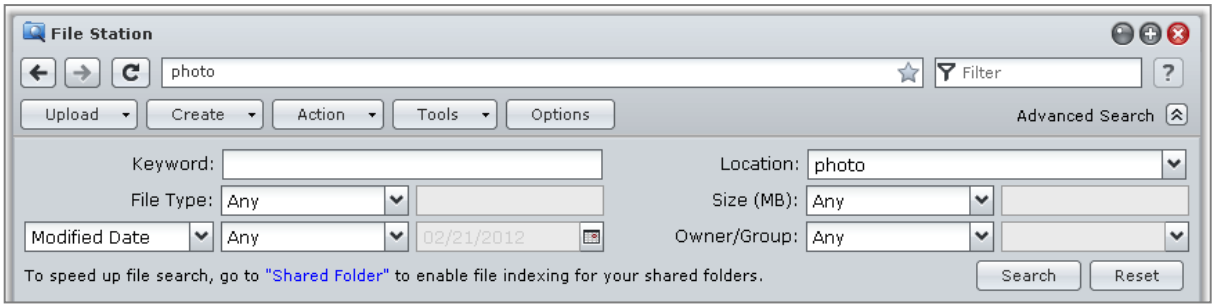
1 Choose **All users** or **Administrators**.

2 Click **OK**.

> ***Note:*** For more information about shared links, see "Share File Links" on Page 75.

Search for Files or Folders

You can filter through files or folders in the current folder. You can also perform advanced search for more refined search results.



To search for files or folders in the current folder:

1 Use File Station to go to the folder containing contents you want to search.

2 In the **Filter** field at the top-right corner of the File Station window, enter a keyword and see the filtered result in the main area of the window.

To perform advanced search:

1 Use File Station to go to the folder containing contents you want to search.

2 At the top-right corner of the File Station window, click the button to the right of **Advanced Search** to reveal the **Advanced Search** panel.

3 Enter information or choose from drop-down menus in the following search criteria:

- **Keyword**: Enter a keyword to search for files or folders with matching names.

  Note:

  You can use global pattern [*] (meaning any number of random characters) or [?] (meaning 1 random character) in the keyword. For example, [a*n] can represent [**actio**n], [a**ttentio**n], or [an].

  You can use space pattern [ ] to separate more than one keywords. For example, [**a tion**] can represent [**act**i**on**], [**a** func**tion**], [func**tion a**dded], or n**ation**.

  You can add double quote ["] at the beginning and the end of the keyword to search for exact matches. For example, [**"a typ"**] can represent [**a typ**e], but cannot represent [**typ**i**cal**].

- **Location**: The default location is the current folder. If you want to search other locations, select any of the listed shared folders to search its contents, or select **Other locations** to select any other locations.
- **File Type**: Choose **Extension** to limit the search range to specific types of files, or choose **Folder** to search for folders only.
- **Size (MB)**: Choose from **equals**, **is greater than**, and **is less than**, and then enter a size to search for files with matching sizes.
- **Modified Date** or **Created Date**: Choose from **is exactly**, **is before**, and **is after**, and then choose a date from the calendar to search for files with matching created or modified dates.
- **Owner/Group**: Choose **Owner** or **Group**, and then choose from the drop-down menu to search for files or folders belonging to the selected owner or group.

Note: Other than **Location**, you have to specify at least one search criterion.

4 Click **Search** to start the search, or click **Reset** and specify the search criteria again. When the search is complete, matching files will be listed in the main area of File Station.

Note: For quicker search result, it is recommended that you index shared folder contents. See "Index Shared Folder Contents" on Page 62 for more information.

Set File Station in Action

With the **Action** menu, right-clicking, and dragging-and-dropping, you can easily download, copy, move, rename, delete, extract, and compress files or folders, and more.

Download Files or Folders from Synology DiskStation

Follow the steps below to download files or folders from DiskStation to your computer.

To download files to your local computer:

1 Select the files or folders you want to download. (Press and hold Shift or Ctrl while making multiple selections.)

2 Choose **Download** from the **Action** menu, and then choose any of the following:

- **Download**: Choose this option to download the files using your web browser's download functionality.
- **Add to queue - Overwrite** or **Add to queue - Skip**: Depending on whether you want to overwrite files or folders with the same name at the destination, choose either of the options to add the files to the download queue (which will appear by clicking the downward arrow at the top-right corner).

Note:

- Under Windows environment, characters **\ * ? " > | # %** contained in the filename will be replaced by **-** after downloading.
- If you make multiple selections, File Station will archive your selections into a zip file before downloading.

Upload Files or Folders to Synology DiskStation

Use any of the following methods to upload files or folders from your computer to Synology DiskStation.

Method 1:

1 From the upper part of the left panel, choose a destination folder on Synology DiskStation.

2 Choose **Upload**, and select files or folders from your local computer.

3 Click **OK** to start uploading.

Method 2:

1 From the lower part of the left panel, select a folder on your local computer. The main section now displays the contents of the selected folder.

2 Select the files or folders you want in the main section, and then click **Upload**.

3 Select a destination folder on DiskStation in the window that appears.

4 At the top-right corner of the window, select **Overwrite** if you want to overwrite files or folders with the same name in the destination folder. Otherwise, select **Skip**.

5 Click **OK** to start uploading.

Method 3:

1 On the left panel, drag a folder from your computer (the lower part) to any folder on the DiskStation (the upper part).

2 In the pop-up menu that appears, choose **Upload - Overwrite** to overwrite files or folders with the same name in the destination folder. Otherwise, choose **Upload - Skip** to skip the files with the same filename.

Method 4:

1 From the upper part of the left panel, select a destination folder on DiskStation.

2 Select the files on your computer's desktop or file explorer (for example, Windows Explorer or Mac Finder), and then drag and drop them into File Station.

3 In the dialog that appears, tick the checkbox if you want to overwrite file(s) with the same name in the destination folder, and then click **Upload**.

Note:

- If you are using Google Chrome, Firefox, Mac Safari 5.1 or later, or have installed JRE 5 or later, you can upload files with size over 4GB. Otherwise, you can only upload up to 2GB of contents at a time.
- Uploading using drag-n-drop is supported on specific browsers only: Chrome, Firefox, Mac Safari 5.1 or onwards.
- If you are using Chrome for Linux, and then log in to DSM via the HTTPS protocol, you need to import a trusted certificate (under the **HTTP Service** tab at **Main Menu** > **Control Panel** > **DSM Settings**) to be able to upload using drag-n-drop.

When you upload files and folders using any of the above methods, you can see the uploading progress of the files and folders in the top-right corner of the desktop.

You can also click the upward arrow at the right end of the taskbar to see the **Upload Queue**.

Copy or Move Files or Folders on Synology DiskStation

Use any of the following methods to copy files or folders between folders on Synology DiskStation.

Method 1:

1 Select the files or folders you want to move or copy. (Press and hold Shift or Ctrl while making multiple selections.)

2 Choose **Cut** or **Copy** from the **Action** menu.

3 Go to the destination folder on DiskStation or your computer.

4 Choose **Paste** - **Overwrite** or **Paste** - **Skip** from the Action drop-down menu, depending on whether you want to overwrite files or folders with the same name in the destination folder.

Method 2:

1 Select the files or folders you want. (Press and hold Shift or Ctrl while making multiple selections.)

2 Drag any folders or files from the main section to another DiskStation folder on the left panel.

3 In the pop-up menu that appears, choose **Copy** - **Overwrite**, **Copy** - **Skip**, **Move** - **Overwrite**, or **Move** - **Skip** to overwrite or skip files or folders with the same name in the destination folder.

Note:

- When copying or moving files/folders to a directory in FAT file system, characters **\ *?">|** in the filename will be replaced by **–**, and the Metadata of Mac files will be deleted.

- If you cut files from your local computer, and then paste it in a DiskStation folder, the files will still be retained on your local computer.

Rename a File or Folder on Synology DiskStation

1 Select a file or a folder.

2 Do one of the following:

- Choose **Rename** from the **Action** menu.
- Right-click the file or folder and choose **Rename**.

3 Enter a new name in the window that appears and click **OK**.

Create a Folder

1 Go to the directory where you want to create a folder.

2 Do any of the following:

- Click **Create folder**.
- Choose **Create folder** from the **Action** menu.

3 Enter a new name in the window that appears and click **OK**.

Delete Files or Folders

1 Select the files or folders you want. (Press and hold Shift or Ctrl while making multiple selections.)

2 Do one of the following:

- Choose **Delete** from the **Action** menu.
- Right-click one of the files or folders and choose **Delete**.

Extract an Archive

1 Select an archive you want to extract.

2 Choose **Extract** from the **Action** menu. You can see the contents of the archive in the **File list**.

3 Click the **Option** tab to enter the password if the archive is password-protected.

4 Click **Destination** at the bottom, and select a destination folder on Synology DiskStation in the window that appears.

5 Do one of the following:

- To extract all files and folders in the archive, click **Extract All**.
- To extract some files or folders in the archive, select them in the **File list** and click **Extract Selected**.

Note: File Station can extract the following archive formats: .zip, .tar, .gz, .tgz, .rar, .7z, .iso (ISO 9660 + joliet)

Compress Files or Folders

1 In the main section, select the files or folders on Synology DiskStation that you want to compress. (Press and hold Shift or Ctrl while making multiple selections.)

2 Do one of the following:

- Choose **Compress to "(file name)".zip** from the **Action** menu.
- Right-click one of the selections and choose **Compress to "(file name)".zip**.
- To use advanced options (such as renaming or encrypting the archive, using different compression levels or modes), choose **Add to archive** instead.

Note:

- You cannot compress files or folders on your local computer using File Station.
- Supported archive formats: .zip, .7z.

Open a File in a New Window

Open a file on Synology DiskStation in a new tab or window of the web browser to preview it instantly.

To open a file in a new window:

1 Select the file you want to preview.

2 Do one of the following:

- Choose **Open in New Window** from the **Action** menu.
- Right-click the file and choose **Open in New Window**.

If your browser can view the selected file, it will be opened in a new browser window.

> ***Note:*** The browser setting will decide what file types can be viewed directly.

Create My Favorites or Desktop Shortcuts

With File Station, you can add frequently-used DiskStation folders to **My Favorites** at the top of the left panel for quicker access, or create desktop shortcuts for DiskStation files or folders. For more information, click the **Help** button (with a question mark) at the top-right corner, and then go to **File Station** > **Read and Move Files** > **Create My Favorites or Desktop Shortcuts**.

Edit the Properties of Files and Subfolders

You can edit the access privileges to files and subfolders (meaning folders and their subfolders in a shared folder), copy download links and open file in a new browser window in the **Properties** window.

View or Change File or Folder Permissions

With File Station, you can set access privileges to files and subfolders. This function is especially useful when you want to allow different groups of users to access different subfolders in a shared folder.

> ***Note:*** To set access privileges to shared folders, use Synology DiskStation Manager instead. See "Allow Users or Groups to Access Shared Folders" on Page 59 for more information.

To allow users and groups to access files and subfolders:

1 Select the files and folders for which you want to set access privileges. (Press and hold Shift or Ctrl while making multiple selections.)

2 Right-click one of the files or folders, or choose the **Action** menu, and then choose **Properties**.

3 In the **Owner & Group** section, do the following:

- Choose the owner of the selected files and folders from the **Owner** drop-down menu.
- Choose the user group of the selected files and folders from the **Group** drop-down menu.
- All the other users or groups not chosen here belong to the **Others** group.

4 Click the **Permission** tab, and then tick the **Read**, **Write** and **Execute** checkboxes to allow or disallow **Owner**, **Group**, and **Others** to access the selected files and folders.

> ***Note:*** When you set access privileges for multiple files, gray checkboxes (if any) mean the privileges they represent (such as owner's **Read** privilege) are inconsistent among the files, and the original privileges for each file will be preserved. You can tick those gray checkboxes (until they turn white) to make the access privileges consistent among all files.

5 If you want the settings to be applied to all of the subfolders, tick the **Apply to this folder, sub-folders and files** checkbox.

6 Click **OK**.

> ***Note:*** You are not allowed to edit the access privileges to files and subfolders in the **photo** shared folder here. To set access privileges to photo albums for Photo Station users, see "**Set Album's** Privacy Settings" on Page 101 for more information.

Obtain a File or Folder's Download Link

You can obtain the download link to a file or folder and share the link with other users.

To obtain a file or folder's download link:

1 Select the file or folder for which you want to obtain its download link.

2 Do one of the following to open the **Properties** window:

- Choose **Properties** from the **Action** menu.
- Right-click the file or folder and choose **Properties**.

3 Right-click the download link, and choose the pertinent function from the shortcut menu to copy the download link. The name of the function may vary depending on the web browser you are using.

4 Send the link to other users via Email or instant messages. They can download the linked file or folder by entering their username and password.

Note:

- To download a file or folder with the download link, valid DiskStation username and password are required.
- With File Station, you can only perform the upload action for files and folders on your computer. All the other File Station actions and properties setting are available for files and folders on Synology DiskStation only.

Share File Links

With File Station, you can generate URLs for DiskStation files, which could be used by people without DSM user credentials to download the shared files. For more information, click the **Help** button (with a question mark) at the top-right corner, and then go to **File Station** > **Share File Links**.

Mount Remote Folders or Virtual Drives

File Station allows you to mount remote folders to access contents shared by network computers or other DiskStations, or virtual drives to access contents within disc images. That way, you can easily navigate all available network resources or disc images with File Station. For more information about remote folders or virtual drives, click the **Help** button (with a question mark) at the top-right corner, and then go to **File Station** > **Mount Remote Folders** or **Mount Virtual Drives**.

Edit Music Information

With File Station's Music Information Editor, you can view or edit the information of music files.

To view or edit music information:

1 Right-click the music file and choose **Edit music information**.

2 Here you can view or modify the music file's information, or choose a language from the **Codepage** drop-down menu to convert non-Unicode text to Unicode and display the text in the correct language. (**System default** is the codepage you specified at **Main Menu** > **Control Panel** > **Regional Options**.)

3 Click **Save** to finish the setup.

Note: Music Information Editor supports the following formats: mp3, ogg.

View Documents, Photos, or Videos

With File Station, you can view documents, videos or photos. For more information, click the **Help** button (with a question mark) at the top-right corner, and then go to **File Station** > **Read and Move Files** > **View Documents, Photos, or Videos**.

Edit Photos

With File Station, you can edit photos with web-based editors, such as Pixlr Editor or Pixlr Express. For more information, click the **Help** button (with a question mark) at the top-right corner, and then go to **File Station** > **Read and Move Files** > **Edit Photos**.

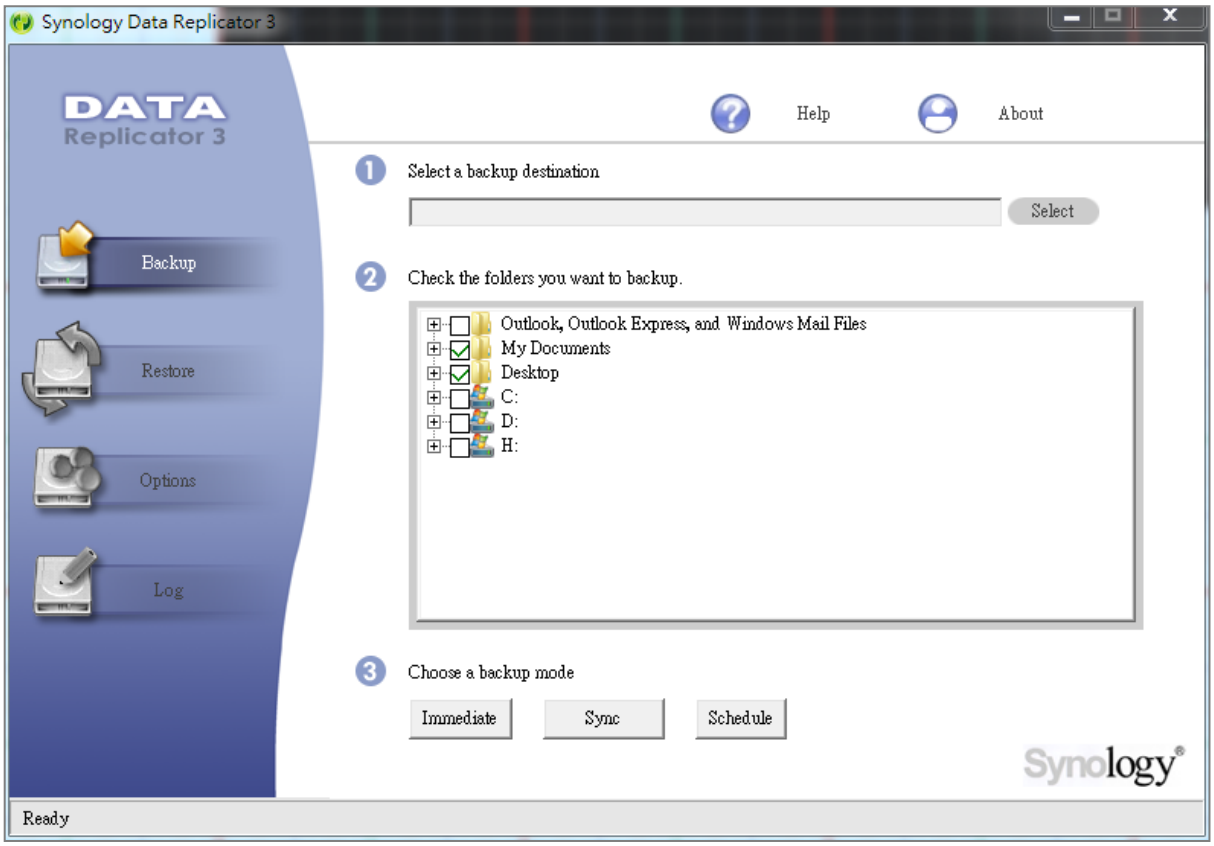
Chapter 9

Back Up Data

Synology offers comprehensive backup solutions for your computer and Synology DiskStation. You can back up data on your computer to Synology DiskStation. If you are **admin** or a user belonging to the **administrators** group, you can also back up DiskStation data with local or network backup, or sync shared folder contents between DiskStations. The creative Copy button simplifies external storage devices backup with One-touch design. The support for the Amazon S3 backup service and the innovative Time Backup package give you other choices for server backup.

Back Up Computer Data

Synology-designed Data Replicator 3 allows you to back up data from a Windows computer to Synology DiskStation. If you are using a Mac or Linux, Synology DiskStation can also serve as their backup destination.



Use Data Replicator for Windows

The Synology Data Replicator installation package can be found on the Installation disc and Synology's Download Center at: http://www.synology.com/support/download.php

What Can Data Replicator Do?

- Monitor specific folders on your Windows computer and perform real-time backup when any modification to the contents within a monitored folder is made.
- Adjust backup versions and restore points.
- Restore backup data from Synology DiskStation to your Windows computer according to your preference.

Important:

- Your computer and Synology DiskStation should use the same encoding. See "Language" on Page 22 for more information.
- Synology Data Replicator 3 is the next generation of Synology Data Replicator. It can only restore the data on Synology DiskStation that was backed up after Data Replicator 3 was installed. If users have backed up data on Synology DiskStation using Synology Data Replicator, we recommend restoring data on Synology DiskStation to PC first before using Synology Data Replicator 3.

Data Replicator Requirement:

- **Free HDD Space:** 5MB
- **Operating System:** Windows 2000 or later
- **Best Screen Resolution:** 1024 x 768 or above
- **Network Environment:** Microsoft Networking over TCP/IP enabled and has network connection with Synology DiskStation

To install Data Replicator:

1 Insert the Installation disc into the optical drive of your computer.

2 Click **Data Replicator 3**, and follow the onscreen instructions to finish installation.

To use Data Replicator:

For detailed instructions on how to use Data Replicator, see its Help by clicking the **Help** button.

Use Time Machine for Mac

Synology DiskStation provides compatibility for backup with Apple Time Machine. Mac users can back up their data to Synology DiskStation's shared folder without problem.

To set Synology DiskStation as Time Machine's backup destination:

1 Go to **Main Menu** > **Control Panel** > **Win/Mac/NFS** and tick **Enable Mac file service**.

2 Choose a shared folder from the **Time Machine** drop-down menu. The chosen shared folder will become Time Machine's backup destination.

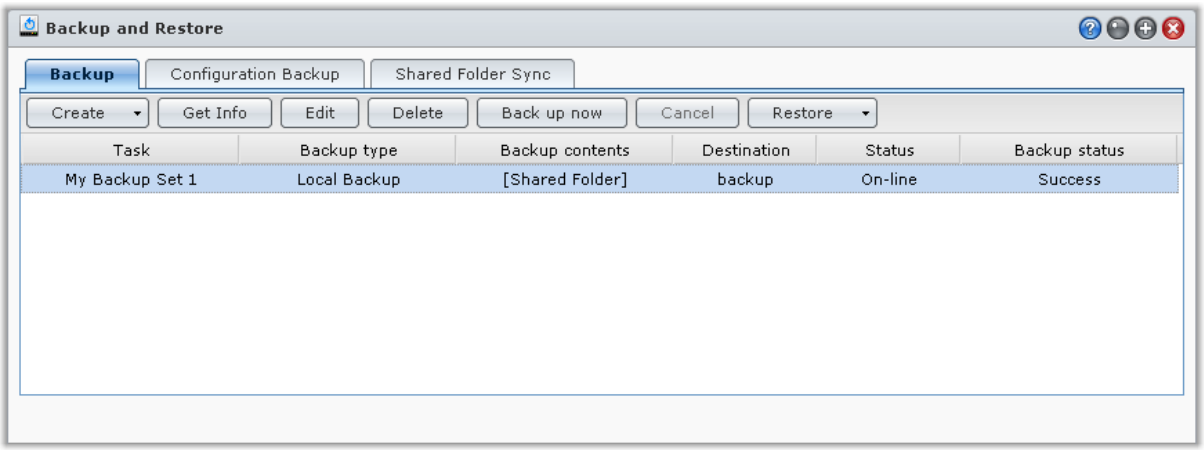
Note: For more information about using Time Machine, see the help on your Mac computer.

Use rsync for Linux

You can use rsync to back up Linux data to Synology DiskStation.

Back up Data or iSCSI LUN on Synology DiskStation

Other than backing up computer data to Synology DiskStation, you as **admin** or a user belonging to the **administrators** group can back up the data or iSCSI LUN on your DiskStation.



Ways to Back Up Synology DiskStation Data

Local Backup and Network Backup are ways you can choose to back up data or iSCSI LUN on your Synology DiskStation. Plus, Synology DiskStation also supports Amazon S3 Backup, allowing you to back up data to the Amazon S3 Server.

Local Backup

Local Backup allows you to back up data to the **LocalBackup** folder in the following locations on your Synology DiskStation:

- Another shared folder
- An external USB or eSATA Disk attached to your Synology DiskStation

> ***Note:*** You may need to format the external disk before performing Local Backup to the disk for the first time.

Network Backup

Network Backup allows you to back up data to the **NetBackup** folder in the following locations within the Intranet or over the Internet:

- Another Synology DiskStation
- A rsync-compatible server

> ***Note:*** For more information about enabling Network Backup Service to set up your DiskStation as a backup destination, go to **Main Menu** > **Control Panel** > **Network Backup**, and click the **Help** button (with a question mark) at the top-right corner.

Amazon S3 Backup

Amazon Simple Storage Service (S3) Backup allows you to back up data to the Amazon S3 server.

After you perform an Amazon S3 Backup task, a single backup file will be stored in a **Bucket** on Amazon S3 Server, which is identified by a unique **Set KEY Value** that begins with **SourceServerName_MAC address**, and ends with the complete file path of this file.

With Amazon S3 Backup, backing up to **Amazon S3 RRS** (Reduced Redundancy Storage) is also supported.

> ***Note:***
>
> - There are also encrypted and non-encrypted modes for Amazon S3 Backup.
> - Fees may apply to use the Amazon S3 Backup service.
> - For more information about backing up DiskStation data, go to **Main Menu** > **Backup and Restore** and click the **Help** button (with a question mark) at the top-right corner.

Perform Backup Tasks on Synology DiskStation

Go to **Main Menu** > **Backup and Restore** to perform backup tasks on Synology DiskStation.

Before you start, do the following first:

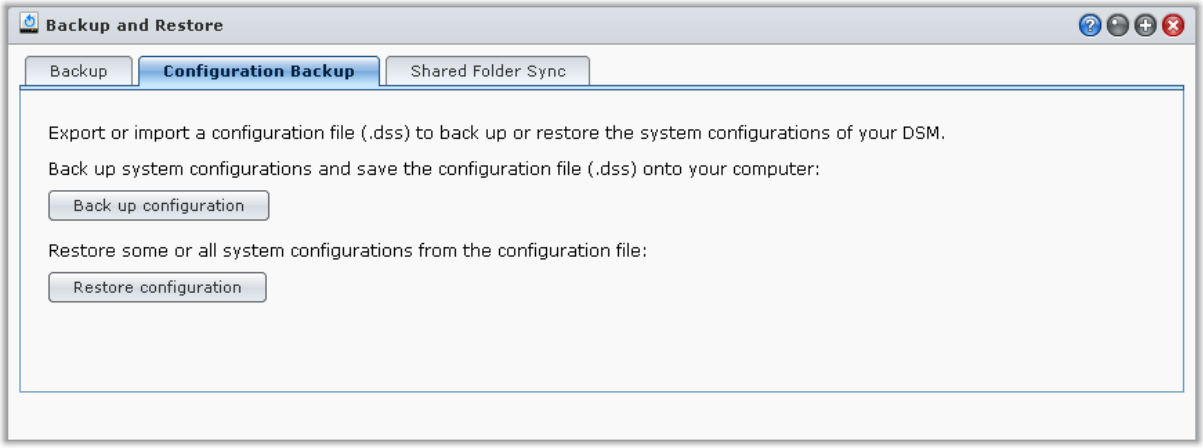
- **For Network Backup to another Synology DiskStation:** Log in to the DSM of the target Synology DiskStation, and then go to **Main Menu** > **Control Panel** > **Network Backup** > **Network Backup**. Make sure **Enable network backup service** is ticked and **Use customized rsync configuration** is deselected to make the target DiskStation available for backup.
- **For Local Backup to external disks:** Go to **Main Menu** > **Control Panel** > **External Devices** and click **Format** to format the external disk.

To perform data or LUN backup or restoration:

For detailed instructions, click the **Help** button at the top-right corner, and then go to **Backup and Restore** > **Backup**.

Back up and Restore System Configurations

Go to **Main Menu** > **Backup and Restore** > **Configuration Backup** to back up and restore the system configurations of your Synology DiskStation.


Backup and Restore
Backup
Configuration Backup
Shared Folder Sync
Export or import a configuration file (.dss) to back up or restore the system configurations of your DSM.
Back up system configurations and save the configuration file (.dss) onto your computer:
Back up configuration
Restore some or all system configurations from the configuration file:
Restore configuration

To back up system configuration:

Choose **Back up configuration**. DiskStation will export a configuration file (with the name **[DiskStation Name]_[Created Date].dss**) to your local computer.

To restore system configuration:

1 Click **Restore configuration**, click **Choose File** to select the configuration file, and then click **OK**.

2 Tick the checkboxes to choose the configurations you want to restore, and then click **OK**.

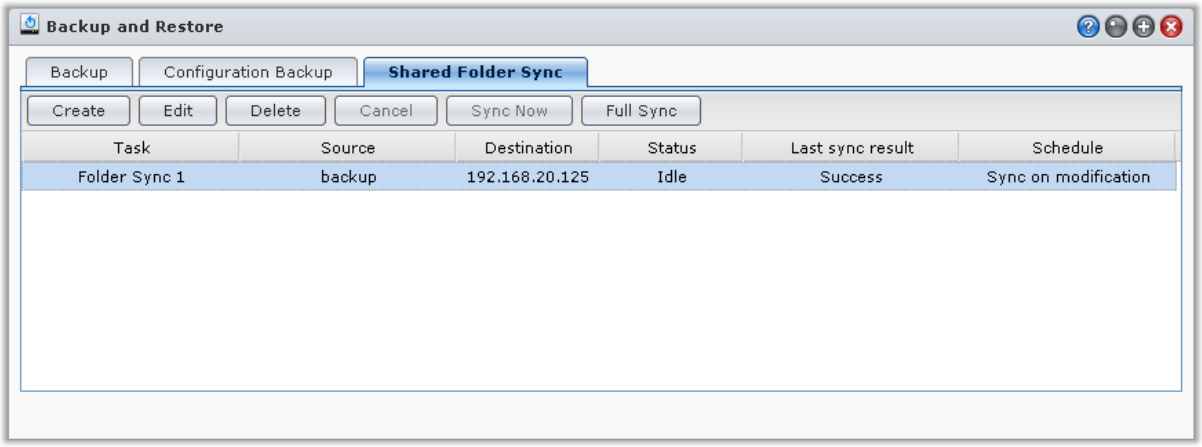
More Information

The configurations that will be backed up include the following:

- Users, Groups, and Shared Folders
- Workgroup, Domain, and LDAP
- File Sharing Services (such as Windows File Service, Mac File Service, NFS Service, FTP, and WebDAV),
- Web Services
- Network Backup Services (such as Network Backup (or Rsync) Service, Shared Folder Sync Service, and Time Backup Service)
- Other Services (such as User Home and Password Strength)

Sync Shared Folder Contents between DiskStations

Shared Folder Sync allows you to sync shared folder contents from a source DiskStation (or "client") to a destination DiskStation (or "server") over the network.



Enable Shared Folder Sync Service

Before performing Shared Folder Sync, you will need to enable the Shared Folder Sync service on the server (destination DiskStation).

To enable Shared Folder Sync service on the server:

1 On the server (destination DiskStation), log in to DSM with the credentials of **admin** or a user belonging to the **administrators** group.

2 Go to **Main Menu** > **Control Panel** > **Network Backup**. Make sure **Enable network backup service** is ticked and **Use customized rsync configuration** is deselected to make the target DiskStation available for syncing.

3 Under the **Shared Folder Sync** tab, tick **Enable Shared Folder Sync service**.

4 Click **Apply**.

Pair or Unpair the Server and the Client

Follow the instructions below to pair or unpair the server and the client. Please note that one server can be paired with only one client at a time, while a client can sync shared folders with multiple servers. If you want to use another client to sync shared folder contents with the server, you need to unpair the server from the current client, allowing another client to perform Shared Folder Sync with the server.

To pair the server with a client:

On a client (source DiskStation), perform Shared Folder Sync and choose the server as sync destination. After the pairing process is complete, you can see the pairing status in the **Info** section.

> ***Note:*** See "Manage Sync Tasks" for more information about how to perform Shared Folder Sync to a server.

To unpair a server from a client:

1 On the server (destination DiskStation), log in to DSM with the credentials of **admin** or a user belonging to the **administrators** group.

2 Go to **Main Menu** > **Control Panel** > **Network Backup** > **Shared Folder Sync**.

3 Click **Reset**.

Manage Sync Tasks

After Shared Folder Sync service is enabled on the server (destination DiskStation), you can log in to a client (source DiskStation) to perform Shared Folder Sync with the server.

To create a sync task:

1 On the client (source DiskStation), log in to DSM with the credentials of **admin** or a user belonging to the **administrators** group.

2 Go to **Main Menu** > **Backup and Restore**, and then click the **Shared Folder Sync** tab.

3 Click **Create**.

4 Enter a name for the task.

5 Select the shared folder you want to sync to the destination.

6 Set up the destination and the following transfer options of this sync task:

- **Enable transfer encryption**: Encrypt data during transfer. Encrypted transfer provides better security, while non-encrypted transfer provides better performance.
- **Enable transfer compression**: Compress data during transfer. It will save network bandwidth but increase CPU loading.
- **Enable block-level synchronization**: Transfer only differential data instead of whole files. It will save network bandwidth but increase CPU loading. Set up the destination and transfer options of this sync task.

7 Set up schedule for the task. There are 3 schedule modes:

- **Run sync every [number] hours** or **Run sync every [number] minutes**: Run sync task by specific interval of hours. The time starts counting from midnight. And the interval cannot exceed 24 hours.
- **Run sync automatically every day at (hh:mm)**: Run sync task daily at specific time.
- **Run sync manually**: Only run sync when manually performed.
- **Run sync on modification**: Run sync task immediately once any change occurs at the source shared folder.

8 Click **Apply**. Now you can see the sync task on the task list, which will be performed according to the specified schedule.

To manage a sync task:

1 Select the task on the task list.

2 Do any of the following:

- Click **Edit** to edit the task.
- Click **Delete** to delete the task.
- If the sync task is not in progress, click **Sync Now** to perform the task right away.
- If the sync task is in progress, click **Cancel** to stop the ongoing task.

  > ***Note:*** If the schedule for a sync task is set as **Run sync on modification**, clicking **Cancel** would stop the ongoing sync task. However, if any changes are made to the contents of any shared folder(s) monitored by the sync task, Shared Folder Sync would resume the task again.

- Click **Full Sync** to sync all data. Shared Folder Sync will run a full sync for the first time, and only sync the modified parts after the first sync. Clicking this button can help you manually sync all data again.

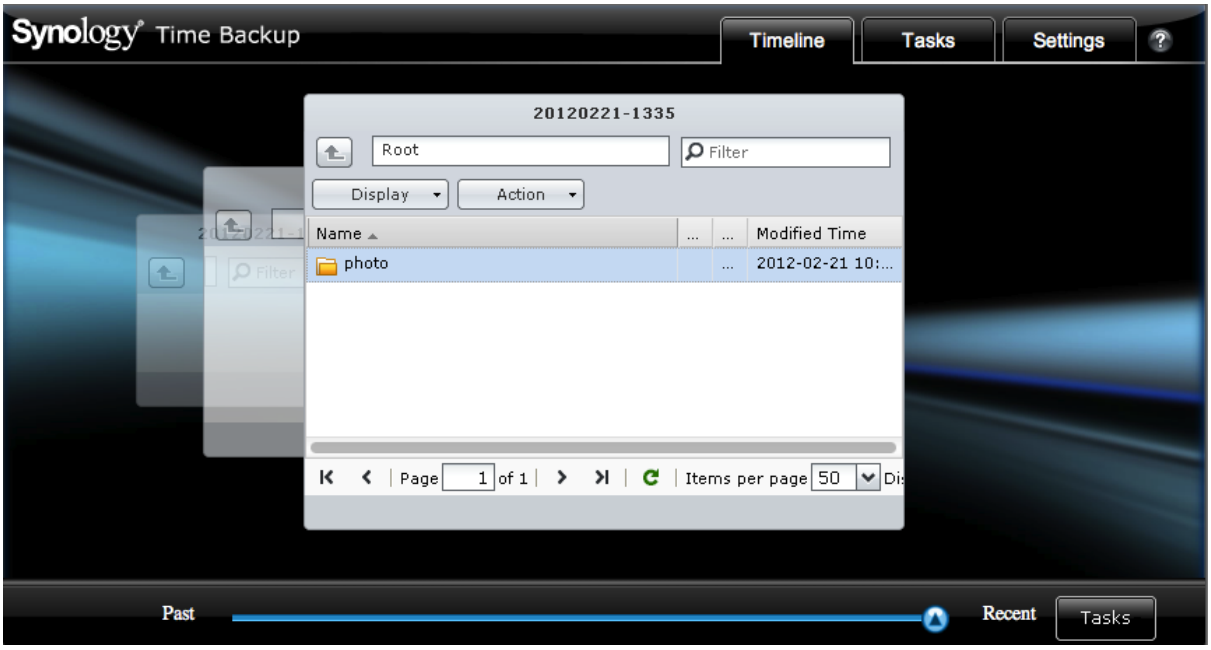
Note:

- All files that have been removed from the client will also be removed from the server.
- The access privilege to folders synced to the server will be set as default, which means not specified.
- During the syncing process, the client will copy the selected shared folders to the server. However, if a folder with the same name already exists on the server, that folder will be renamed as "shared_folder_name 1" to prevent its data from being overwritten.
- Task name must be of 1 to 32 Unicode characters and must not contain the following characters:
  ! " # $ % & ' ( ) * + , / : ; <= > ? @ [ ] \ ^ ` { } | ~
- If you sync shared folders from ext4 to ext3 file system, you may encounter errors when a folder has over 32,000 files in a single directory.
- If the shared folders on the server have been synced with another client, Shared Folder Sync will perform a full sync for the task.
- When transfer encryption is enabled, you have to set up the password. It cannot be left empty.
- When syncing to DiskStation over Internet, you can enter the server name by its external IP address or its hostname. However, if you choose to enter its hostname, the name must be in FQDN (Fully Qualified Domain Name) format, like "abc.bcd.com", for example.
- To set up port-forwarding rules for Shared Folder Sync over the Internet, please choose port 22 for encrypted transfer and port 873 for unencrypted transfer.
- An encrypted shared folder will remain encrypted after syncing. You need the encryption key to mount the shared folders on the destination DiskStation.

Backup DiskStation Data with Time Backup

Synology Time Backup is a quick and flexible way to back up and restore shared folders on DiskStation. You can back up the data locally onto another volume, or onto an external hard disk. You can set up multiple **tasks** and create more than one **version** for each task.

Time Backup features snapshot function. When creating a version, the system will take a **snapshot** and capture the condition of the data within the specified moment. The system will create a version entry within seconds. You can access the newly created version and edit the files you've just backed up with no time delay.



To set a DiskStation as the backup destination for Time Backup:

1 Go to **Main Menu** > **Control Panel** > **Network Backup**. Make sure **Enable network backup service** is ticked and **Use customized rsync configuration** is deselected to make the target DiskStation available for backup.

2 Go to **Main Menu** > **Control Panel** > **Network Backup** > **Time Backup**, tick **Enable Time Backup service**, and then click **Apply**.

To install and run Time Backup on your DiskStation:

Go to **Main Menu** > **Package Center** to install and run the Time Backup package.

To launch Time Backup:

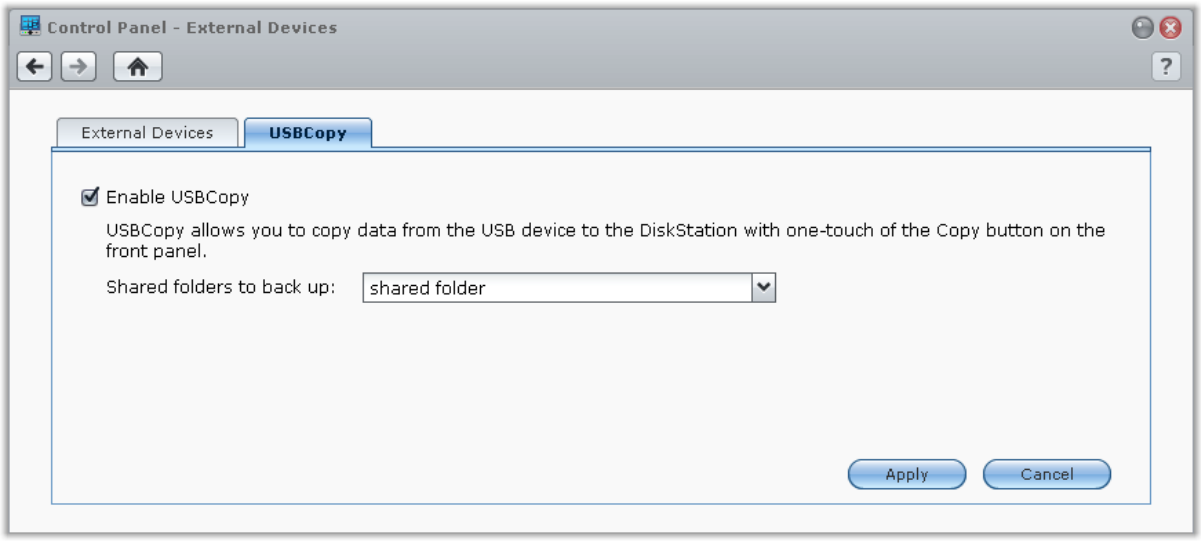
Go to **Main Menu** > **Time Backup**.

For more information about Time Backup, run and launch the package, and then click its **Help** button (with a question mark) at the top-right corner.

> ***Note:*** For more information about installing packages for Synology DiskStation Manager, see "Chapter 11: Discover Various Applications with Package Center" on Page 92.

Back up Data on USB Device or SD Card

You can go to **Main Menu** > **Control Panel** > **External Devices** to specify a shared folder for used with USBCopy or SDCopy, and then use the **Copy** button on the front panel of your DiskStation to copy data from a USB device or SD card to the shared folder.[1]


Control Panel - External Devices
External Devices
USBCopy
Enable USBCopy
USBCopy allows you to copy data from the USB device to the DiskStation with one-touch of the Copy button on the front panel.
Shared folders to back up:
shared folder
Apply
Cancel

To configure USBCopy or SDCopy:

1 Go to **Main Menu** > **Control Panel** > **External Devices** > **USBCopy** or **SDCopy** and specify a shared folder from the drop-down menu.

2 Click **Apply**.

All data on your USB device or SD card will be copied to the specified shared folder when you perform USBCopy or SDCopy.

To perform USBCopy or SDCopy:

1 Connect the USB device or SD card to the USB port or the SD card slot of your Synology DiskStation.

2 Press the **Copy** button (with the letter **C**) on the front panel of your Synology DiskStation.

> ***Note:***
>
> - Only USB devices or SD cards in FAT or NTFS format are supported.
> - For USBCopy, the USB device must be plugged into the USB port on the front panel of Synology DiskStation.
> - The available space of the destination shared folder must be larger than the used space of the USB device or SD card.

[1] USBCopy and SDCopy are supported on specific models only. Visit **www.synology.com** for more information.

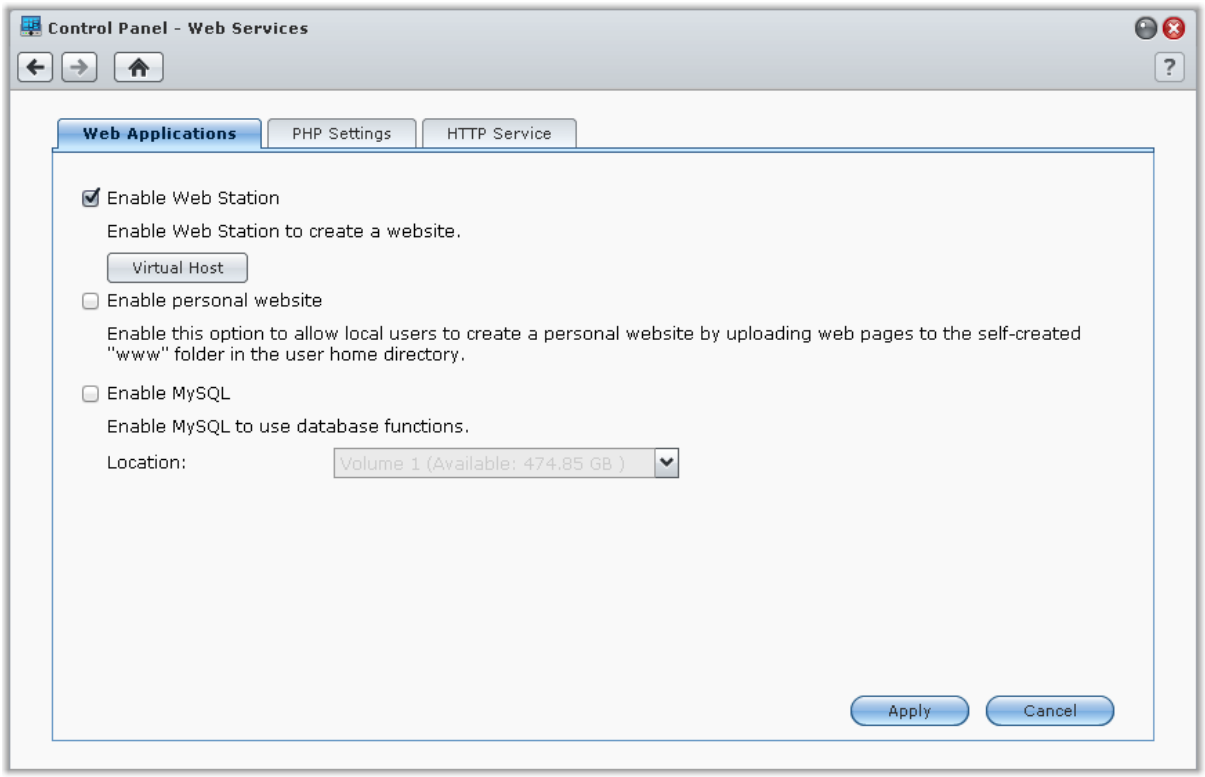
Chapter 10

Host Websites, Email Server, and Print Server

Synology DiskStation is especially designed for small and medium businesses (SMB), providing them with the ability to set up web, email, and print servers on a single Synology DiskStation without spending extra money.

Use Web Station to Host Websites

Go to **Main Menu** > **Control Panel** > **Web Services** to set up your website with Web Station, which is integrated with support for PHP and MySQL.


Control Panel - Web Services
Web Applications
PHP Settings
HTTP Service
Enable Web Station
Enable Web Station to create a website.
Virtual Host
Enable personal website
Enable this option to allow local users to create a personal website by uploading web pages to the self-created "www" folder in the user home directory.
Enable MySQL
Enable MySQL to use database functions.
Location:
Volume 1 (Available: 474.85 GB)
Apply
Cancel

Enable Web Station

When Web Station is enabled, the **web** shared folder will be created automatically. Save your web page content in the folder to publish it on your website.

To enable Web Station:

1 Tick **Enable Web Station**.

2 Click **Apply**.

Web Station support and limitations include:

- The homepage for your website must be named **index.htm**, **index.html**, or **index.php**.
- PHP 5.3.2 is supported.
- The following functions are not supported by PHP: system(), exec().
- When you use the PHP mail() function, the system will automatically retrieve and use the SMTP server information from Synology DiskStation. Make sure you have entered the correct SMTP server information.

> ***Note:*** For more information about SMTP server, see "Manage E-mail Notification" on Page 153.

- The real path of the **web** shared folder is **/volume1/web**. Some applications require the user to set the path in the configuration file.
- The names **blog**, **photo**, **photosrc**, and **webdefault** are reserved folder names. These names cannot be used by Web Station, so please do not create folders with these names under the **web** shared folder.
- You can customize the error page by creating any of the following files and putting them in the **web** shared folder: **missing.html**, **missing.htm**, or **missing.php**. When users try to connect to a page that does not exist, this customized error page will be displayed.

Enable Virtual Host to Host Websites

The Virtual Host support allows you to host up to 30 websites on one Synology DiskStation. Each website can have different port number or even different hostname.

To enable Virtual Host and host websites:

1 Click **Virtual Host** to open the settings window.

2 Click **Create** and enter the following information.

a The name for the subfolder (in the **web** shared folder) that will contain the web pages to build the website

b The hostname for the website

c The protocol (**HTTP** or **HTTPS**) for the website

d The port number for the website

> ***Note:*** To use HTTPS protocol, HTTPS connection needs to be enabled in advance. See "HTTP Service" on Page 17 for more information.

3 Click **Apply**.

4 Click **Virtual Host** and go through the above steps again if you want to set up more websites.

Enable Personal Website

The personal website function is a convenient way to allow Synology DiskStation users to host their own personal website. Each user will have a unique website address **http://Synology_Server_IP/~username** or **http://Synology_Server_Name/~username**.

> ***Note:*** Before enabling personal website, make sure **User Home** is enabled. See "Create User's Home Folder" on Page 55 for more information.

To create a personal website:

1 Tick **Enable personal website** and click **Apply**.

2 Create a **www** folder in the user's home folder.

3 Upload web pages to the **www** folder.

Personal website Support and limitations:

- Local users are only allowed to access the data in the following path:
  - Their own **home** folder
  - /var/tmp
  - /tmp
  - /volume1/@tmp/php
- Synology DiskStation users can customize the error page by creating any of the following files and putting them in the **www** shared folder: **missing.html**, **missing.htm**, or **missing.php**. When users try to connect to a page that does not exist, this customized error page will be displayed.

Enable MySQL

You can enable MySQL to use the MySQL database function for your website. After MySQL is enabled, you can install the **phpMyAdmin** package available at Synology's **Download Center** to manage the MySQL database.

To Enable MySQL:

Tick **Enable MySQL** and choose a volume to store the database data.

Note:

- For more information about installing packages for Synology DiskStation Manager, see "Chapter 11: Discover Various Applications with Package Center" on Page 92.
- By default, the ID for the phpMyAdmin administrator is **root**, and the password is blank. It is recommended that you change the password.
- You can go to **Main Menu** > **Control Panel** > **Restore Defaults** to delete your MySQL databases. See "Restore Synology DiskStation to Factory Defaults" on Page 157 for more information.

Manage PHP Settings

After you have enabled Web Station, you can click the **PHP Settings** tab to configure PHP related settings.

To turn on PHP configuration option register_globals:

1 Tick **Turn on PHP configuration option register_globals** if the PHP application you use requires the register_globals option to be turned on.

2 Click **Apply**.

Important: it is recommended that you turn off the register_globals option for security reasons.

To enable PHP cache:

1 Tick **Enable PHP cache** if you wish to enhance the PHP performance. However it may not take effect under some circumstances.

2 Click **Apply**.

To customize PHP open_basedir:

1 Tick **Customize PHP open_basedir** if you wish to customize your own open_basedir.

2 Type the customized path in the text field. Use "**:**" to separate between each path. For example: /etc:/tmp:/usr/bin/php

3 Click **Apply**.

4 If you want to use the system default setting, uncheck the **Customize PHP open_basedir** and click **OK**.

To select PHP extension:

1 Click **Select PHP extension** to customize your own PHP extension.

2 In the pop-up dialog **PHP extension List**, select which extension you want to enable.

3 You can also click **Default** at top of the dialog to return to default settings.

4 Click **Apply**.

More Information

Install Featured Applications

- After you have finished setting up your web environment, you can install applications to enhance the features of your website using many of the free Open Source applications.
- For a list of featured applications tested to be compatible with Synology DiskStation, visit **http://www.synology.com/support/faq_show.php?q_id=404**. For the download links and installation instructions of those applications, visit their official websites.

Modify HTTP Service Options

Click the **HTTP Service** tab at **Control Panel** > **Web Services**. In addition to the default port number 80, you can add another port for the use of Photo Station and Web Station.

To add an additional HTTP port:

1 Tick **Add additional HTTP port**.

2 Enter any port number between 1 and 65535 in the **HTTP** field.

3 Click **Apply**.

> ***Important:*** You cannot use the following port numbers for HTTP access, because they are reserved for system use.
>
> 20, 21, 22, 23, 25, 110, 137, 138, 139, 143, 199, 443, 445, 515, 543, 548, 587, 873, 993, 995, 3306, 3689, 5000, 5001, 5005, 5006, 5335, 5432, 6881, 8080, 7000, 7001, 8081, 9997, 9998, 9999, 50001, 50002, eMule default ports: 4662 (TCP), 4672(UDP), and FTP default port range: the actual range may vary depending on different models.

To enable HTTPS connection for Web Station and Photo Station:

1 Tick **Enable web HTTPS connection for web services**.

2 Click the optional **Import Certificate**.

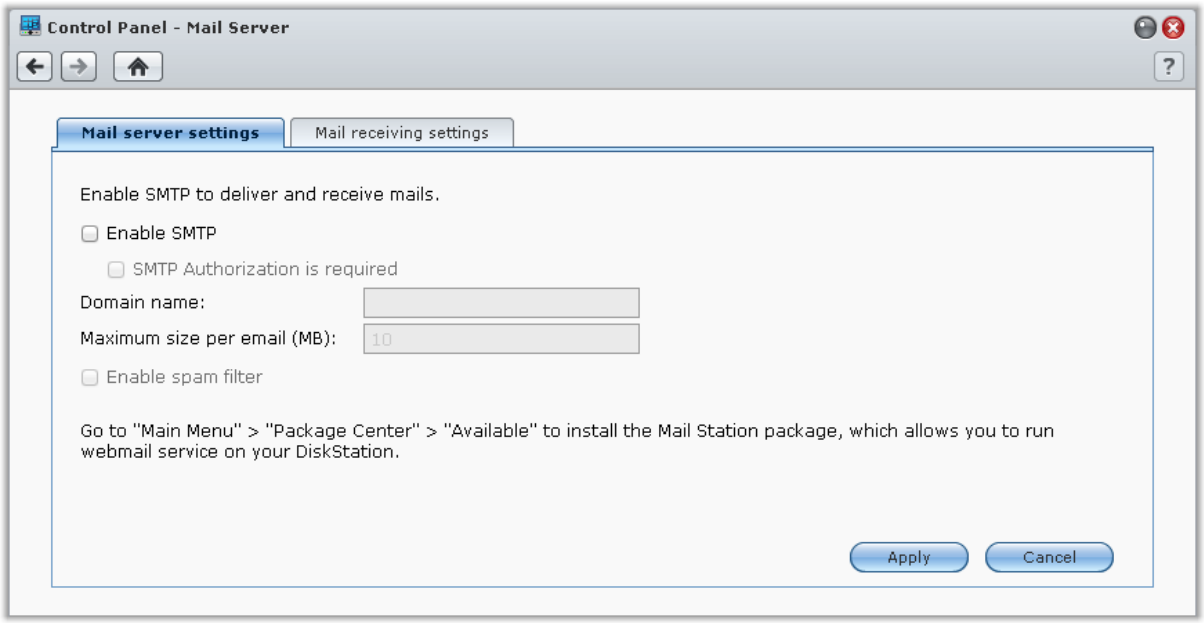
3 Click **Apply**.

By enabling this function, HTTP connections to Web Station and Photo Station will be protected with SSL/TLS encrypting mechanism.

> ***Note:***
>
> - For more information about importing certificate and enabling HTTPS connection for other services, see "HTTP Service" on Page 17.
> - For more information about Photo Station, see "Chapter 12: Share Photos, Videos, and Blogs with Photo Station" on Page 95.

Host Mail Server

You can turn your Synology DiskStation into a mail server, allowing Synology DiskStation users to receive and deliver mail messages using their mail client programs.


Control Panel - Mail Server
Mail server settings
Mail receiving settings
Enable SMTP to deliver and receive mails.
Enable SMTP
SMTP Authorization is required
Domain name:
Maximum size per email (MB):
10
Enable spam filter
Go to "Main Menu" > "Package Center" > "Available" to install the Mail Station package, which allows you to run webmail service on your DiskStation.
Apply
Cancel

Before you start

Register a domain name for your IP, or apply for a DDNS hostname.

> ***Note:*** For more information about registering a DDNS account for Synology DiskStation, see "Register a DDNS hostname for Synology DiskStation" on Page 42.

- When applying for a domain name or dynamic domain name, please fill the MX (Mail eXchanger) record of mail domain with your mail server (that is the FQDN of Synology DiskStation).

  For example, if the mail server is **mail.synology.com**, then fill the MX record with **mail.synology.com**.

- Go to **Main Menu** > **Control Panel** > **User** and enable **User Home** service to allow users to store their mail messages in their home folders. Otherwise, they will not be able to send or receive mails.

  > ***Note:*** For more information about User Home, see "Create User's Home Folder" on Page 55.

Confirm the port forwarding settings:

You should follow the table below to setup port forwarding if NAT is required.

Protocols	SMTP	POP3	IMAP	IMAPS	POP3S
Port	25	110	143	993	995
Note	IMAPS: IMAP over SSL/TLS POP3S: POP3 over SSL/TLS				

Set up Mail Server

Go to **Main Menu** > **Control Panel** > **Mail Server** to enable DiskStation's mail server service.

To set up mail server:

1 Under the **Mail server settings** tab, do the following:

   a Tick **Enable SMTP** to deliver and receive mails.

   b Tick **SMTP Authorization is required** if you want to prevent your mail accounts from being used as a spammer.

   If you use this option, then your users must provide their Synology DiskStation user account and password for authentication while setting SMTP server in their mail clients. Take Outlook Express, for example, you can enable the option at **My server requires authentication** in **Tools** > **Accounts** > **Mail Account** > **Properties** > **Servers**.

   c Fill in the **Domain name**. Your users' mail address will be: **user_name@domain_name** or **user_name@DDNS_hostname**

   > ***Note:*** Make sure you entered the same domain name for your IP, or the same DDNS hostname you registered in **Main Menu** > **Control Panel** > **ezCloud** > **DDNS**.

   d Tick **Enable spam filter** to avoid receiving junk emails.

   e Click **OK**.

2 Under the **Mail receiving settings** tab, enable at least one of the protocols (POP3, POP3 SSL/TLS, IMAP, and IMAP SSL/TLS) to receive mails via mail clients.

Install Mail Station to Enable Webmail Service

With the Mail Station package up and running, DiskStation users can send and receive mails via DSM's webmail service.

To install and run Mail Station:

Go to **Main Menu** > **Package Center** to install and run the Mail Station package.

> ***Note:*** For more information about installing packages for Synology DiskStation Manager, see "Chapter 11: Discover Various Applications with Package Center" on Page 92.

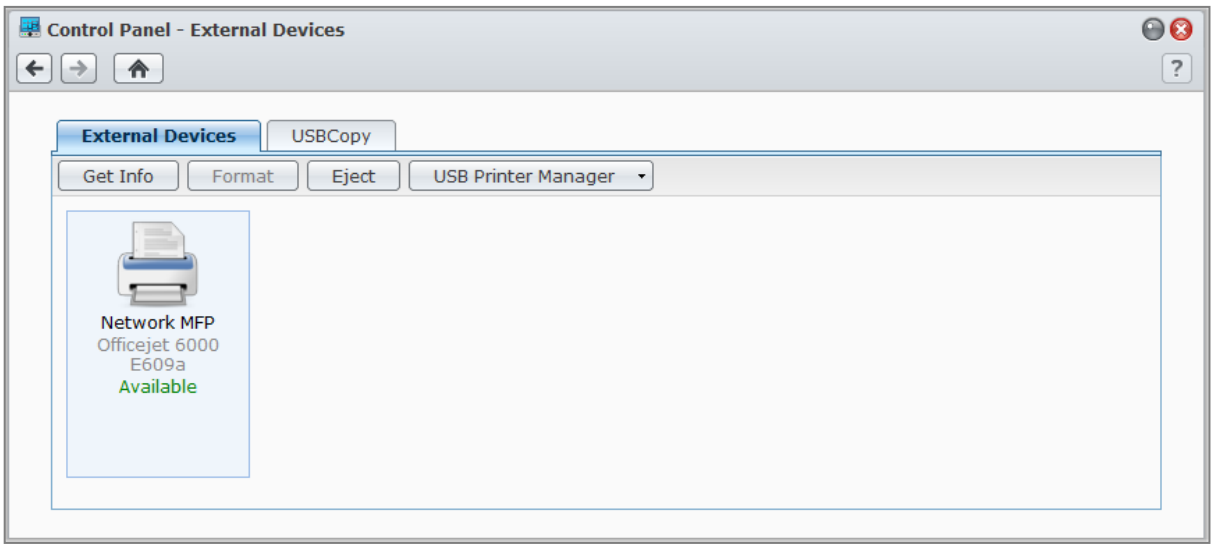
To connect to Mail Station:

Type the following web address in the address bar of your web browser, and then press Enter on your keyboard:
http://Synology_Server_IP_Address/mail/

Note: For more information about using the webmail service, see **Mail Station 2 User's Guide** from Synology's Download Center at: http://www.synology.com/support/download.php

Set Synology DiskStation as Print Server

Go to **Main Menu** > **Control Panel** > **External Devices** to set DiskStation as the print server over your local area network, allowing client computers or mobile devices to access printers connected to DiskStation. Furthermore, the AirPrint support allows you to print to the printer from an iOS device, and the Google Cloud Print support allows you to print to the printer when you are using Google products and services. (Refer to **here** for more information about Google Cloud Print.)[1]



Note: One DiskStation can be connected by up to 2 USB printers.

Set up Print Server on DiskStation

Under the **External Devices** tab, you can set up print server on DiskStation.

To set up print server on DiskStation:

1 Connect the network printer to the USB port of DiskStation, and select the printer's thumbnail appearing on the device list.

> ***Note:*** Connect the printer to the USB port of DiskStation, and select the printer's thumbnail appearing on the device list.

2 Choose **USB Printer Manager** > **Set Up Printer**.

3 Do any of the following:

- Choose **Network MFP** if you want clients over the local area network to use print/scan/fax functions of your multifunction printer.

  > ***Note:*** Scanning and faxing are available for Windows computers only.

- Choose **Network Printer** if your printer only supports printing, or you want clients over the local area network to access the printing function only.

4 Click **Save**, and then click **Close**.

To enable AirPrint support:

1 Select the printer from the device list.

---

[1] For recommended peripheral models, including hard drive, USB printer, DMA, and UPS, please visit **www.synology.com**.

2 Choose **USB Printer Manager** > **Set Up Printer**.

3 Tick **Enable AirPrint**.

4 Choose your printer's brand and driver from the drop-down menus.

5 Click **Save** and then click **Close**.

6 If you want to print a test page to make sure AirPrint is successfully enabled, choose **USB Printer Manager** > **Print Test Page**.

Note:

- Enabling AirPrint will also enable DSM's Bonjour Printer Broadcast function.
- AirPrint is available for iOS 4.2 or onward only.

To enable Google Cloud Print support:

1 Select the printer from the device list.

2 Choose USB Printer Manager > Set Up Printer.

3 Tick Enable Google Cloud Print.

4 Enter your Google email address and password in the fields.

5 Choose your printer's brand and driver from the drop-down menus.

6 Click Save.

7 If you want to manage your printer(s) and print job(s), click the Google Cloud Print link.

8 Click Close.

9 If you want to print a test page to make sure Google Cloud Print is successfully enabled, choose **USB Printer Manager** > **Print Test Page**.

To manage the printer:

1 Select the printer from the device list.

2 Do any of the following:

- Click **Get Info** to get the printer's information.
- Choose **USB Printer Manager** > **Release Printer** to release the connection between the printer and a client (Network MFP mode only). After a client connects to the multifunctional printer to receive faxes and scan files, the connection might last for a while and need to be released to allow the next client in line to connect to the printer.
- Choose **USB Printer Manager** > **Clean up spool space** to cancel all printing jobs on all printers.
- Click **Eject** and disconnect the printer from the USB port of DiskStation.

Set up Computer to Access Print Server

After the print server is set up on your DiskStation, Windows, Mac, and Linux client over the local area network can connect to the print server and access its print/fax/scan service.

To set up print server access with Windows:

1 Install and open Synology Assistant on your computer.

2 Click the **Printer Device** tab, click the **Add** button, and follow the wizard to complete the setup process. If you cannot see the **Printer Device** tab, enable it by clicking the **Settings** button (with a gear icon) at the top-right corner.

Note:

- Using Synology Assistant to set up print server access under the **Network Printer** mode is only available for DiskStations running on DSM v2.0.1-3.0368 and onward.
- Using Synology Assistant to set up print server access under the **Network MFP** mode is only available for DiskStations running on DSM v3.1-1553 and onward.
- For other methods of setting up print server access, open DSM Help, go to **Main Menu** > **Control Panel** > **External Devices**, click the **Help** button (with a question mark) at the top-right corner, and then refer to the **Access Printer from Windows** section.

To set up print server access with Mac OS X:

1 Make sure DSM's Bonjour Printer Broadcast function is enabled. See "Manage Mac File Service" on Page 49 for more information.

2 For ways of setting up printer server access with Mac OS X, go to **Main Menu** > **Control Panel** > **External Devices**, click the **Help** button (with a question mark) at the top-right corner, and then refer to the **Access Printer from Mac** section.

After the print server access is set up, clients over the local area network can access the printing/faxing/scanning service provided by the print server.

Access Print Server with iOS Devices

If you have enabled DSM's AirPrint support by following the instructions of the "Set up Print Server on DiskStation" section, any iOS devices running on iOS 4.2 or later can print to the printer connected to your DiskStation.[1]

To access the print server with an iOS device:

1 Use your iOS device to browse to the document, web page, mail message, or photo you want to print.

2 Tap the action button, and then tap **Print**.

3 Select the printer named **[Printer_Name (DiskStation_Name)]**, and then tap **Print**.

[1] For recommended peripheral models, including hard drive, USB printer, DMA, and UPS, please visit **www.synology.com**.

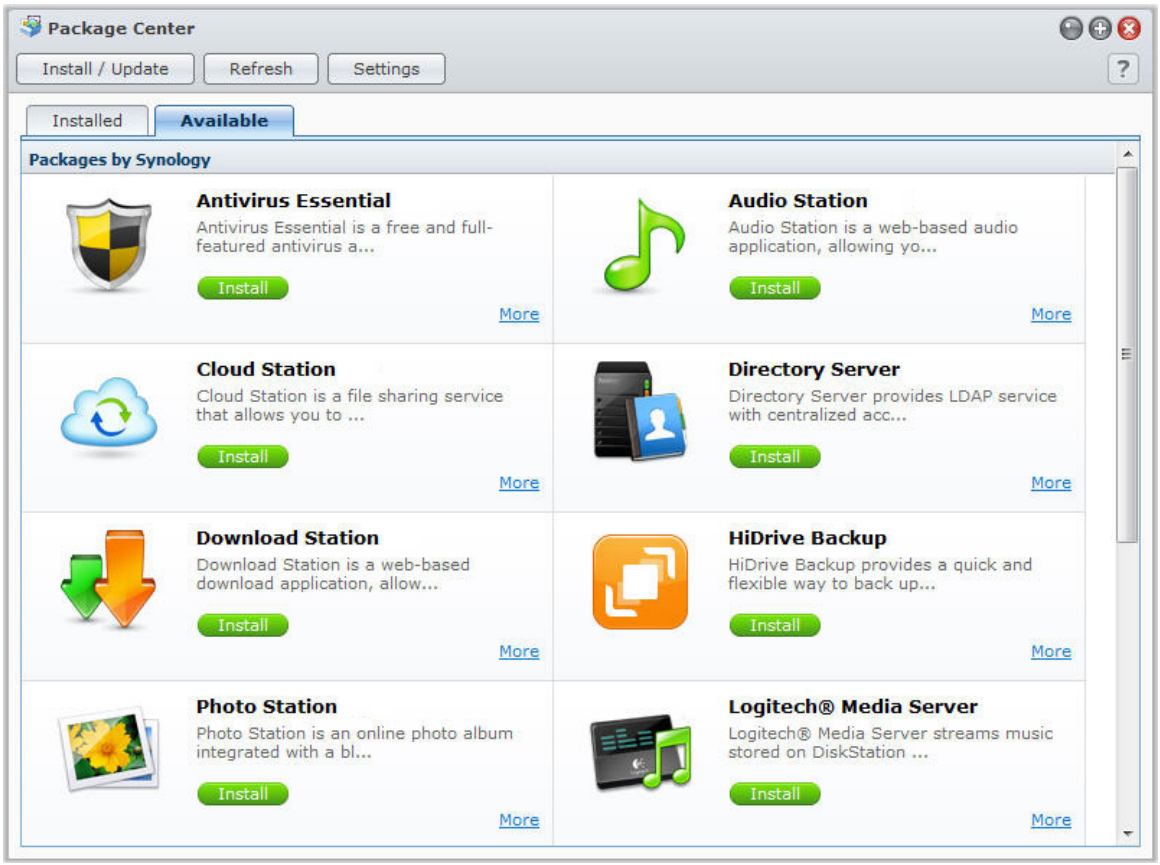
Chapter 11

Discover Various Applications with Package Center

Synology has integrated third party or Synology-designed applications into packages that can be installed on DiskStation and managed with Package Center.

Coming with full-featured applications, Synology DiskStation provides you with a variety of privileges to enjoy multimedia contents, share photos, videos, and blogs, access files anytime and anywhere, watch and record live view videos, search and download files from the Internet, back up precious data, and build your own cloud.

This chapter introduces packages available at Package Center and explains how to manage packages, configure Package Center, and launch enabled applications.



What Package Center Offers

Go to **Main Menu** > **Package Center** to find out what Package Center has to offer.

Following is the brief introduction to the packages currently available at Package Center.

- **Audio Station**: Audio Station is a web-based audio application, allowing you to access the music library on your DiskStation or Internet radio, and play music on your computer, iOS/Android devices, or AirPlay devices. For those who are particular about sound quality, you can connect an audio adapter to the Synology DiskStation and USB speakers to enjoy music.
- **Antivirus Essential**: Antivirus Essential is a free and full-featured antivirus application that can be easily installed to safeguard the system partition and files on your DiskStation.
- **Cloud Station**: Cloud Station is a file sharing service that allows you to easily sync files between your DiskStation and computers.

- **Directory Server**: Directory Server provides LDAP service with centralized access control, authentication, and account management. You can manage LDAP users and groups with this package.
- **Download Station**: Download Station is a web-based download application, allowing you to download files from the Internet through BT, FTP, HTTP, NZB and eMule. With Download Station, you can download files from file hosting sites, and search for torrent files via system default search engines as well as self-added ones with the BT search function.
- **iTunes Server**: iTunes Server allows you to share the music and videos on your DiskStation with all iTunes clients within a local network, and to browse and play these multimedia contents with iTunes. iTunes Server also provides the Smart Playlist feature, enabling you to create playlists containing songs that match the criteria you specify.
- **Mail Station**: Mail Station 2 provides a webmail service for you to access mails stored on your DiskStation. In addition, you can also receive mails from any other mail servers to keep all your emails in one convenient place.
- **Media Server**: Media Server provides a multimedia service for you to browse and play the multimedia contents on Synology DiskStation via DLNA/UPnP home devices. With Media Server, you can easily connect those devices such as TV sets and stereo systems to your home network, and stream multimedia files stored on DiskStation to the devices to enjoy music, photos, and videos.
- **Photo Station**: Photo Station is an online photo album integrated with a blog for you to easily share photos, videos, and blog over the Internet. Moreover, you can also browse photos and watch videos saved on your DiskStation with your iPhone, iPad and Android mobiles on the go.
- **Syslog Server**: Syslog Server offers an easy solution for gathering and displaying log messages from network devices. It provides you with a centralized log management interface and the flexible search function to help you find the useful information efficiently.
- **Time Backup**: Time Backup is an innovative solution that backs up DiskStation data in multiple versions. You could intuitively browse among versions and easily restore data to any version of specific time.
- **VPN Server**: VPN Server offers an easy VPN solution that turns your DiskStation into a VPN server, providing a secure way of connecting to a private LAN at a remote location. Both PPTP and OpenVPN services are supported.

Manage Packages

Follow the instructions in this section to install/uninstall, run, update, and check the packages.

To install package(s), do either of the following:

- Under the **Available** tab, you can see a list of available packages. Click **Install** to install the packages you want. Installed packages will be moved to the **Installed** tab.
- If you want to install a package by uploading the **.spk** file (available at Synology's **Download Center** or the third party websites), click **Install / Update** and follow the wizard to install the new package.

To run or stop package services:

Under the **Installed** tab, click **Run** or **Stop** to run or stop the services.

To update installed package, do either of the following:

- When package updates are available, you will see the **Update** buttons under the **Installed** tab. Click those buttons to update the packages.
- If you want to update a package by uploading the **.spk** file (available at Synology's **Download Center** or the third party websites), click **Install / Update** and follow the wizard to update the package.

> ***Note:*** If you want to receive email or desktop notification when updates are available, click **Settings**, tick the checkboxes, and then click **OK**.

To see the information about a package:

Under the **Installed** or **Available** tab, click **More** to check the package's information. Click **Close** to finish.

To uninstall an existing package:

1. Under the **Installed** tab, click the icon of the application which you want to remove.
2. In the window that appears, click **Uninstall** and then **Yes** to uninstall the package.

Configure Package Center

Click **Settings** to manage the settings of Package Center.

To enable notifications about package updates:

1 Click the **Notification** tab, and then tick **Enable email notification** and/or **Enable desktop notification**. The first option allows DSM to send you emails when new updates are available, while the latter allows DSM to display a notification message at the top-right corner of your DSM desktop.

> ***Note:*** For email notifications to take effect, configure your DSM's email notification settings first (at **Main Menu** > **Control Panel** > **Notification**).

2 Click **OK**.

To add a package resource:

1 Click the **Package Sources** tab, click **Add**, and then enter the name and location of your package sources.

2 Click **OK**. When the package source is added, you will see a new tab displayed in Package Center. Click the tab to install and run the packages from the package source.

Launch Enabled Applications

After installing and running the packages, you can launch the enabled application in several ways.

To launch the installed and enabled application, do any of the following:

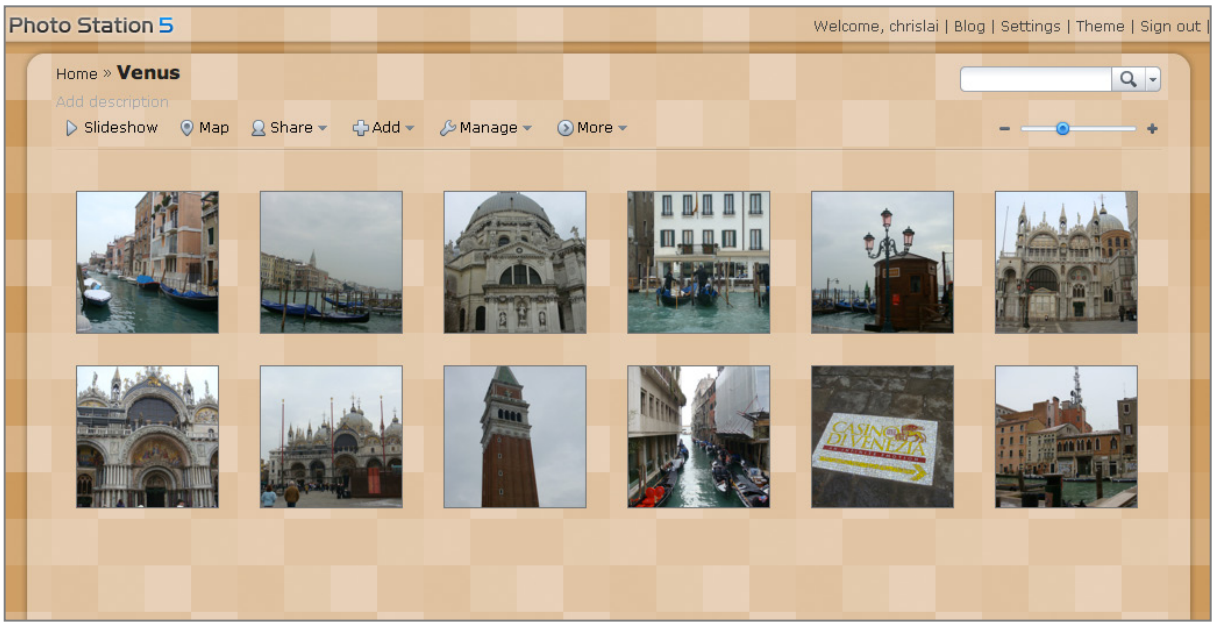
- Go to **Main Menu** > **[Application name]**.
- Open **Main Menu** and drag the application's thumbnail to DSM desktop, and then click **[Application name]** on the desktop.
- Go to **Main Menu** > **[Application name]**. Right-click the application icon on the taskbar and then choose **Pin to Taskbar**. When the application is closed, its icon will stay pinned to the taskbar, and you can click it to launch the application again.

Chapter 12

Share Photos, Videos, and Blogs with Photo Station

Photo Station is an online photo album integrated with a blog for you to easily share photos, videos, and blog over the Internet. Moreover, you can also browse photos and watch videos saved on your DiskStation with your iPhone, iPad and Android mobiles on the go.

This chapter explains how to install and enable Photo Station, set thumbnails and video settings, manage Photo Station user accounts, create and manage albums and blogs, and view and edit photos and videos.



Install Photo Station

Go to **Main Menu** > **Package Center** to install Photo Station owned by DSM **admin**.

To install Photo Station:

Under the **Available** tab, click **Install** to install the package.

- If there is only one volume on your DiskStation, you will be asked if you want to run the package after installation. Click **Yes** to continue.
- If there are multiple volumes on your DiskStation, you will be asked to choose from the drop-down menu to specify a destination volume to install the package.
  - **a** Select your destination volume and click **Next**.
  - **b** Tick **Run after installation** if you want to run the package once the installation is complete, and click **Apply** to install the package.

When the installation is complete, the package will be moved to the **Installed** tab and the **Main Menu** will automatically expand with the package's thumbnail on it. Moreover, the **photo** shared folder will be created automatically to contain Photo Station data.

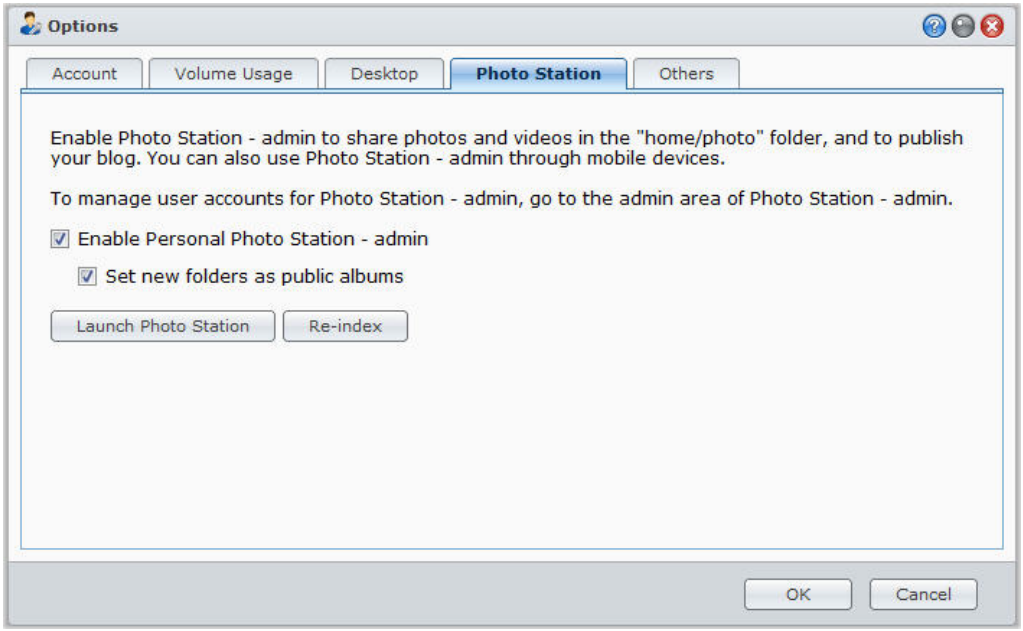
Support and Limitations

- **Video formats viewable on Photo Station:** 3G2, 3GP, ASF, AVI, DAT, DivX, FLV, M4V, MOV, MP4, MPEG, MPG, QT, WMV, XviD

- **Video formats not viewable but downloadable on Photo Station:** RM, RMVB, VOB, RV30, RV40, AC3, AMR, WMA3
- **Browser requirement:** JavaScript enabled
- **Microsoft Internet Explorer requirement:** ActiveX controls and plug-ins and Active scripting enabled
- **Upload limit:** If you upload contents with Photo Station, you can only upload up to 2GB of contents at a time.

Enable Personal Photo Station

DSM **admin** or a user belonging to the **administrators** group can enable Personal Photo Station service to allow all DiskStation users to have their own Personal Photo Station.


Options
Account
Volume Usage
Desktop
Photo Station
Others
Enable Photo Station - admin to share photos and videos in the "home/photo" folder, and to publish your blog. You can also use Photo Station - admin through mobile devices.
To manage user accounts for Photo Station - admin, go to the admin area of Photo Station - admin.
Enable Personal Photo Station - admin
Set new folders as public albums
Launch Photo Station
Re-index
OK
Cancel

To enable Personal Photo Station service for DiskStation users (by admin or a user belonging to the administrators group):

1 Click the figure icon at the top-right corner of your DSM desktop, and then go to **Options** > **Photo Station**.

2 Tick **Enable Personal Photo Station - [username]**.

3 Click **OK**.

To edit Personal Photo Station settings:

1 Tick **Set new folders as public albums** if you want the uploaded photo albums available to visitors.

2 Click **Re-index** to reconstruct the index structure of the image files if you found missing images in Photo Station.

3 Click **OK**.

To launch Personal Photo Station, do any of the following:

- Click **Launch Photo Station**.
- Go to **Main Menu** and click **Photo Station - [username]**.
- Type the following web address in the address bar of your web browser: **http://Synology_Server_IP_Address/photo/**

Photo Station will be launched in a new browser window.

Enable Personal Photo Station for DSM Users

DSM **admin** (or a user belonging to the **administrators** group if Photo Station's account system is set as **DSM accounts**) can enable Personal Photo Station service to allow all DSM users to have their own Personal Photo Station.

To enable Personal Photo Station service for DSM users:

1 Sign in to Photo Station as DSM **admin** (or a user belonging to the **administrators** group if Photo Station's account system is set as **DSM accounts**), and then go to **Settings** > **General**.

2 Tick **Enable Personal Photo Station service** and then click **Save**.

3 After Photo Station is enabled, users can edit the Photo Station settings, which are basically the same as those of **admin**'s Photo Station.

Note:

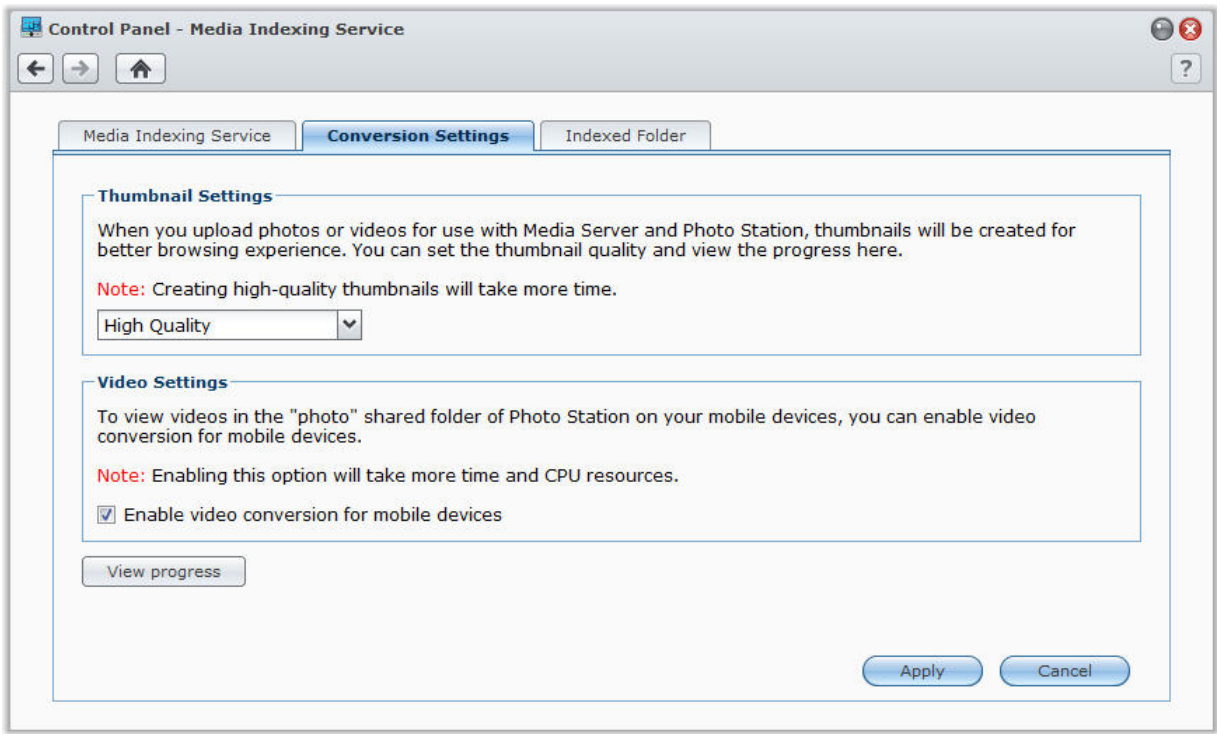
- Please log in to DSM as **admin** (or a user belonging to the **administrators** group), go to **Main Menu** > **Control Panel** > **User** > **User Home** to activate user home service first before enabling Personal Photo Station service. See "Create User's Home Folder" on Page 55 for more information.
- Only local user can use Personal Photo Station.

To connect to the user's Photo Station, do any of the following:

- Click **Launch Photo Station**.
- Go to **Main Menu** and click **Photo Station – [username]**.
- Type the following web address in the address bar of your web browser:
  http://Synology_Server_IP_Address/~username/photo/

Set Thumbnail and Video Settings

Go to **Main Menu** > **Control Panel** > **Media Indexing Service** to set the thumbnail quality and monitor the conversion progress


Control Panel - Media Indexing Service
Media Indexing Service
Conversion Settings
Indexed Folder
Thumbnail Settings
When you upload photos or videos for use with Media Server and Photo Station, thumbnails will be created for better browsing experience. You can set the thumbnail quality and view the progress here.
Note: Creating high-quality thumbnails will take more time.
High Quality
Video Settings
To view videos in the "photo" shared folder of Photo Station on your mobile devices, you can enable video conversion for mobile devices.
Note: Enabling this option will take more time and CPU resources.
Enable video conversion for mobile devices
View progress
Apply
Cancel

When you upload photos or videos for use with Media Server or Photo Station, thumbnails will be created for better browsing experience. You can set the thumbnail quality and monitor the thumbnail creation progress.

Meanwhile, if you would like to view videos in the **photo** shared folder of Photo Station on your mobile devices, you can enable video conversion and view the conversion progress as well.

For more information about setting thumbnail quality and monitoring thumbnail creation progress, click the **Help** button (with a question mark) at the top-right corner.

Manage Photo Station User Accounts

When Photo Station or Personal Photo Station is enabled by DSM **admin** or DSM users, they become their Photo Station's administrator, who can create, modify, or delete their Photo Station's user accounts.

Choose Account System

Photo Station administrators can choose to integrate DSM user accounts into Photo Station, or manage independent user accounts.

> ***Note:*** This option is not available for Personal Photo Station.

To choose an account system for Photo Station (not available for Personal Photo Station):

1 Sign in to Photo Station as DSM **admin**, and then go to **Settings** > **General**.

2 Choose either of the following options from the **Account system** drop-down menu:

- **DSM accounts**: This option allows DSM admin to integrate DSM accounts into Photo Station.
- **Photo Station accounts**: This option allows DSM admin to manage independent accounts for Photo Station.

3 Click **Save**.

Manage User Accounts

Photo Station administrators can create, edit, or delete user accounts.

> ***Note:*** Creating or deleting user accounts is not available if Photo Station's account system is set as **DSM accounts**. You will need to log in to DSM as DSM **admin** (or a user belonging to the **administrators** group), and then go to **Main Menu** > **Control Panel** > **User** to manage the user accounts.

To create a user account:

1 Sign in to Photo Station as DSM **admin**, and then go to **Settings** > **User Accounts**.

2 Click **Create User** and enter the username, description, and password.

3 If you like, do any of the following in the **Other Settings** section:

- Choose whether you want to disable this account. Doing so will deny the user's access until it's enabled again.
- Choose whether to allow this user to modify his/her account information.
- Choose whether you want to set this user as Photo Station's administrator. If this user is set as admin, he/she will be able to sign in with his/her own account and perform administrative privileges.

4 Click **Save**.

To edit a user account:

1 Sign in to Photo Station as DSM **admin**, and then go to **Settings** > **User Accounts**.

2 Select the user and click **Edit**.

3 Make changes to the settings. (See "To create a user account" above for more information.)

4 If you want to modify the user's access privileges to existing photo albums, tick the **Browse Album** or **Upload Files** checkboxes under the **Access Permissions** tab.

5 Click **Save**.

To delete a user account:

1 Sign in to Photo Station as DSM **admin**, and then go to **Settings** > **User Accounts**.

2 Select the user, click **Delete**, and then click **Yes**.

Create Albums

If you have Photo Station's administrative privilege, you can use any of the following methods to upload the new album to the **photo** shared folder (for the default Photo Station managed by DiskStation **admin**) or **home/photo** folder (for Personal Photo Stations managed DiskStation users).

> ***Note:*** The length of time required largely depends on the size and the amount of files. Of all the methods mentioned in this section, we recommend you use Photo Uploader (in Synology Assistant), which utilizes your computer's system resources for quicker thumbnail generation and video compression before the uploading process starts.

Upload Albums Using Photo Uploader (Synology Assistant)

You can upload your albums to Synology DiskStation using Photo Uploader, one of the several functions of Synology Assistant.

Before uploading, Photo Uploader will use your computer to compress videos to H.264 format, and generate thumbnails for the photos and videos.

> ***Note:*** For more information about using Photo Uploader, see the Help of Synology Assistant.

Create Album Using Photo Station

Go to Photo Station's home page, choose **Add** > **New Album**, and follow onscreen instructions to create a new album.

> ***Note:*** See "Upload Photos and Videos to an Album" on Page 100 for more information about uploading photos and videos to an album.

Upload via File Sharing Protocols or File Station

Select the photos and videos on your computer, and put them in a folder that will become your new album.

To upload within the Intranet:

If your computer and Synology DiskStation are within the same Intranet, you can upload the album via the file sharing protocols for your platform.

> ***Note:*** For more information about accessing folders within the Intranet, see "Access Files within the Intranet" on Page 63.

To upload over the Internet:

If your computer and Synology DiskStation are not within the same Intranet, you can upload your album via File Station or FTP.

> ***Note:*** For more information about accessing folders over the Internet, see "Access Files via FTP" on Page 66 or "Access Files via File Station" on Page 69.

Upload Using DS photo+ (Mobile App)

If you have an iOS or Android device, you can upload photos from your device to Photo Station with DS photo+. See the DS photo+ Help for more information.

Manage Albums

Manage your albums with the upload, delete, download, and reorder functions. Edit the titles, descriptions, and access privileges according to your need. You can also enable virtual albums in Photo Station.

Upload Photos and Videos to an Album

You can upload photos or videos to sub-folders in the **photo** shared folder (for Photo Station) or the **home/photo** folder (for Personal Photo Station).

To upload photos and videos to an album:

1 Choose **Add** > **Upload from my computer** or **Copy from my DiskStation**.

2 In the window that appears, do any of the following:

- If you want to upload photos or videos to the current folder, choose **Upload to the current album**.

  Note: This option is available only when you are already browsing photos within an album.

- If you want to upload photos or videos to a subfolder, choose **Upload to**, and name the subfolder.

  Note: If you are browsing albums at Photo Station's home page, you can choose from the drop-down menu to set the new folder as a public, private, or password locked album.

3 Click **Browse** and then select the photos or videos you want to upload. After you've made your selection, the selected photos or videos will be shown in the window. Use the **Delete** or **Clear All** button to change your selection.

4 Choose from any of the following drop-down menus:

- **Options**: Decide whether to convert thumbnails that will be uploaded along with the original photos.
- **If the file already exists**: Decide whether to overwrite or skip files that already exist in the album.

5 Click **Upload** to start uploading, which may take a while to complete. When the upload process is complete, refresh your browser window to see the uploaded photos or videos.

Note:

- You can only upload up to 2GB of contents at a time.
- Only users with the access and upload rights to the album can upload photos and videos. See "Set Album's Privacy Settings" on Page 101 for more information.

Download Albums

You can allow users to download albums via Photo Station.

To allow users to download albums:

1 Go to **Settings** and click the **Photos** tab.

2 Tick **Allow users to download album**.

3 Click **Save**.

To download an album:

1 When you are on Photo Station's home page, click an album cover to enter the album's thumbnail page(s).

2 Choose **More** > **Download**.

3 In the window that appears, do any of the following:

- Choose **Download all** to download the entire album as a zip file.
- Choose **Select items to download**, select the items you want to download and click **OK**. (Press and hold Shift or Ctrl while making multiple selections.)

Your selections will be downloaded as a zip file.

Reorder Albums

1 Go to **Settings** and click the **Photos** tab.

2 Do any of the following:

- Choose the number of albums per page from the **Albums per page** drop-down menu.
- Choose **Ascending** or **Descending** from the **Sort by folder name** drop-down menu to sort albums in ascending or descending order.
- Choose **Sort by preference**, click **Rearrange**, click **OK**, and then drag any album to change its order.

3 Click **Save**.

Set Album's Privacy Settings

1 Go to **Settings** and click the **Photos** tab.

2 Click **Access Permissions** and tick the checkboxes under any of the following headers:

- **Public**: The album can be seen by all viewers.
- **Private**: The album can be accessed by user accounts with proper access permissions.
- **Password**: If you select this option, enter a password under the **Password** header. The album will be locked unless viewers enter the correct password to unlock the album.

3 Click **Save**.

Enable Virtual Album

Photo Station allows you to display the most recent photos and videos in virtual albums, which will be listed in front of all the other albums on the **Photos** page.

To enable Virtual Album:

1 Go to **Settings** and click the **Photos** tab.

2 Click **Virtual Album**.

3 Tick the checkboxes to enable any of the following virtual albums:

- **Recent photos**
- **Recent videos**
- **Recently commented photos**
- **Recently commented videos**

4 Choose from the drop-down menus to specify the number of photos or videos that will be displayed in the selected virtual albums.

5 Click **Save**.

Delete or Move Album

1 When you are on Photo Station's home page, choose **Manage** > **Delete** or **Move**.

2 Select the albums you want to delete or move, and then follow onscreen instructions to delete the selected albums or move them into another album.

Share with Social Networks

When you browse your albums, you can upload photos from Photo Station to your Facebook or Picasa accounts, or sync Photo Station albums with Facebook.

To upload photos to social networks:

1 Browse to the photos you want to upload, and then choose **Share** > **Upload to Facebook** or **Upload to Picasa**.

2 Click the thumbnails to select your photos, and then click **Upload to Facebook** or **Upload to Picasa**.

3 In the window that appears, click **Connect with Facebook** or **Connect with Picasa** and then authorize with your social network account.

4 If you want to upload the photos to a new album, choose **Create a new album** and name the new album. If you want to upload the photos to an existing album, choose **Upload to an existing album** and choose the album from the drop-down menu.

5 Click **OK** and click **Close** when the upload process is done.

Now you can log in to Facebook to see the uploaded photos.

To authorize with Facebook before syncing albums:

1 Go to **Settings** and click the **Photos** tab.

2 Click **Connect with Facebook**, authorize using your Facebook account info, and then click **Log In**. If the account is successfully authorized, the status will be changed to "[Facebook account name] is authorized".

3 Tick **Sync with Facebook regularly** if you want Photo Station to sync albums with Facebook regularly.

4 If you want to cancel Facebook authorization, click **Cancel authorization** and then click **Yes**.

To sync a Photo Station album with Facebook:

1 Make sure you have completed Facebook authorization (see above).

2 When you are within an album, choose **More** > **Sync with Facebook**.

3 In the window that appears, name the new Facebook album, and then click **OK**.

4 If you want to sync the album immediately, choose **More** > **Sync with Facebook right now**.

Now you can login to Facebook to see the synced album. You can also see synced albums by going to Photo Station's home page and clicking **Albums synced with Facebook**.

To stop syncing with Facebook:

When you are within a synced album, choose **More** > **Don't sync with Facebook**.

View and Edit Photos and Videos

After the album is created, you can log in to Photo Station and go to the **Photos** page, where you can see the albums you uploaded. Click the album cover to browse photos or play videos within the album.

To manage a photo or video, click the following links:

- **Information**: See the metadata information of the photo or video.
- **Slideshow**: Start a slideshow of the album.
- **Map** or **Geotag**: See where the photo is taken (for **Map**) or set the photo's geotag information by right-clicking on the map and setting the coordinates (for **Geotag**).
- **Share** > **Blog it**: Embed the photo or video into a new blog post.
- **Share** > **Link to** > **Facebook**, **Twitter** or **Plurk**: Share the photo or video's link to the social networks.
- **Share** > **Upload to Facebook** or **Upload to Picasa**: Upload the photo or video to the social networks.
- **Share** > **Get photo link**: Share the link of the photo by pasting it to email or instant message.
- **Share** > **Facebook**, **Twitter** or **Plurk**: Share the photo or video's link to the social networks.
- **Share** > **Upload to Facebook** (photo only): Upload the photo to Facebook.
- **Edit**: Choose a web-based external photo editor to edit the photo. .

> ***Note:*** Before sharing a link or editing a photo, make sure you have configured port forwarding of Photo Station on your router. If the public HTTP port is not 80, set the router port number at **Settings** > **General**.

- **Add Comments**: Add comments to the photo or video.
- **Download** (video only): Download the video to your computer.

> ***Note:*** This option is available only if you have ticked **Allow users to download video files** at **Settings** > **Photos**.

- **Set as Album Cover** (top-right corner): Set the photo or video as the album cover.
- **Rotate** (top-right corner; photo only): Rotate the photo.
- **Delete** (top-right corner): Delete the photo or video.

Customize Album Layout

You can go to **Settings** and click the **Photos** tab to customize album layout.

To customize layout:

1 Click **Theme**, click **Layout** at the top-left corner, and then edit the following layout options. You can see a preview of your layout adjustment in the lower half of the browser window. If you want to reset the layout options to default settings, click **Reset to default settings**.

- **Template**: You can choose to have a dark-colored or light-colored template, and adjust the transparency of the template.
- **Background Image**: This could be a pattern or photo provided by Synology, or an image uploaded from your computer.
- **Background Color** or **Font Color**: Choose from the drop-down menus to find your favorite background or font color.
- **Logo Image**: This could be the default image or an image uploaded from your computer, or you could choose to hide the logo image.

2 If you know how to use CSS codes to fine-tune your layout, click **CSS Customization** at the top-left corner, enter your CSS codes in the text field, and then click **Preview** to see a preview of your adjustment in the lower half of the browser window.

3 Click **OK** to save the changes and return to the **Settings** page.

To customize thumbnails within any albums:

1 Do any of the following:

- Specify the default thumbnail mode by choosing either of the following:
  - **Simple mode**: Display square-shaped photo thumbnails by cropping the edges of photos.
  - **Detail mode**: Display photo thumbnails by showing the full photos and displaying the titles beneath the photos.

  For each mode, you can specify the default thumbnail size in the **Default thumbnail size** field.

  > ***Note:*** When you are browsing photo thumbnails within an album, you can also specify the default thumbnail mode and size using the slider at the top-right corner and the **More** > **Layout** menu.

- Choose the number of thumbnails per page from the **Thumbnail per page** drop-down menu.
- Choose from the **Sort by** drop-down menu to determine how thumbnails are sorted, and then choose from the **Sort order** drop-down menu to sort thumbnails in ascending or descending order.

2 Click **Save**.

Use the Blog

If you are a Photo Station administrator, you can sign in to enable, manage and back up your personal blog. Moreover, you can also personalize your blog space by adjusting its layout.

Modify Blog Settings

You can go to **Settings** > **Blog** to enable the blog function and mange its settings.

To enable the blog function:

1 Tick **Enable the blog function**.

2 Click **Save**.

To modify blog layout, do any of the following:

- Click **Other Settings** and follow onscreen instructions to edit the blog's title, number of posts on the main page, and the autosave interval.
- Click **Blog Banner** and follow onscreen instructions to customize the banner section (below the logo image) on the blog's main page.

- Click **Theme**, and see “To customize layout” for more information about theme-related settings.
- Click **Layout & Modules**, and do the following:
  - **a** In the **Layout** section, choose a layout to put your modules into the left or right panel on the main page.
  - **b** In the **Modules** section, drag and drop the modules between the two folders to decide which modules will be used for your blog.
  - **c** Click **Save**.
- If you want to modify the settings of a module, choose it from the drop-down menu in the **Module Settings** section, click **Customize**, and then follow onscreen instructions to complete the settings. The modules can be used to search previous articles or display various information (your personal info, an album slideshow, or links to your friends' sites, blog archives, etc).

Note: You are not allowed to customize a module if its name is appended with "(Setup unavailable)".

Manage Blog Posts

You can go to **Blog** to add, edit, and delete blog posts. Your readers can view or share your posts, and add their comments to interact.

To add a new post:

1. Click **New post** on the left side.
2. Do the following to add a new post:
   - Enter the post title, edit the post, and insert images or videos if you wish. To insert a video, click the **Insert/edit embedded media** button and enter the video URL.
   - Select a label action from the **Label actions** drop-down menu.
3. Click the **Settings** tab if you want to manage the following settings:
   - Choose who can read the blog post from the **Readers** drop-down menu.
   - If you want to display a post abstract on the main page, tick **Show abstract when article is on main page** and enter the abstract message in the text field.
   - To allow visitors to post comments, tick **Allow comments**.
- Click **Publish**.

Limitation:

- For the post title, you can enter up to 512 characters, whereas 40,960 characters are allowed for the post content.
- The following html tags in article content will be filtered out automatically:
  form, input, script, table, td, tr, tbody, th, html, body.

To edit or delete a post:

Click the post title to see the full article, click **Edit** or **Delete**, and then follow onscreen instructions to edit or delete the post.

Readers can click the post title and do any of the following to interact:

- Click **Add Comments** to add comments to the post.
- Click the **Facebook**, **Plurk**, or **Twitter** icon to share the article's link to the social networks.

Back up your Blog

You can go to **Settings** > **Blog** to back up your blog and save the backup file on your computer.

To back up your blog:

1. Choose **Back up blog** and click **Start**.
2. Follow onscreen instructions to save the backup file (synoblog.backup) on your computer.

To restore the backup data:

1. Choose **Restore blog data**, choose to overwrite or preserve existing blog data, and then click the button next to **Select a backup file** to locate the backup file on your computer.
2. Click **Start** and **Yes** to restore the backup data.

Chapter 13

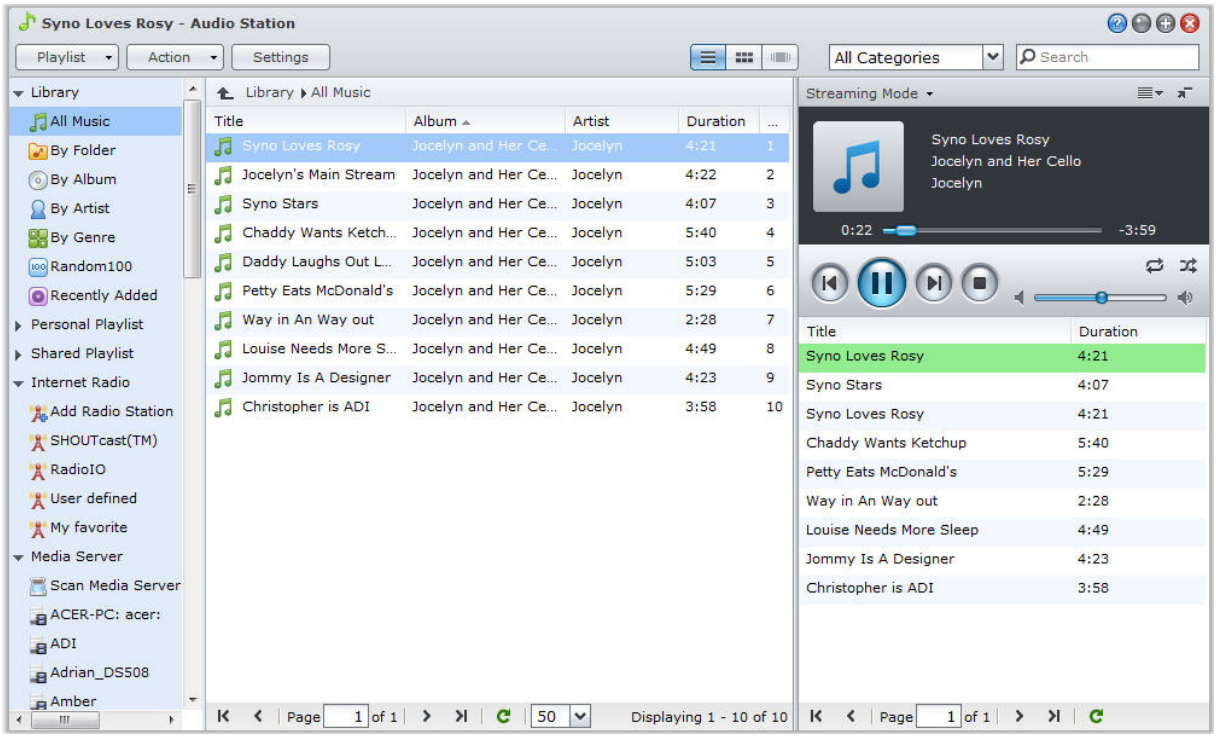
Play Music with Audio Station

Audio Station is a web-based audio application, allowing you to access the music library on your Synology DiskStation, choose available audio sources on the local area network, and add your favorite music to playlists for playback.

With Audio Station, you can also browse and play songs on your iPod or on the DLNA-certified Digital Media Servers, and listen to Internet radio.

Audio Station can play music through USB speakers connected to your Synology DiskStation, your computer, DLNA-certified Digital Media Renderers, AirPlay compatible devices[1], or external speakers or home stereo equipment connected to the audio dock of Synology Remote (sold separately).

This chapter explains how to enable Audio Station, choose audio source, browse music from the source, add music to the playlist, and add music and playlists to the queue panel for playback.



Note: Audio Station supports the following formats:

- **Audio:** (USB Mode) AAC, FLAC, M4A, MP3, Ogg Vorbis, WMA, WMA VBR; (Streaming Mode) MP3, M4A, M4B
- **Playlist:** M3U, WPL

Install Audio Station

Go to **Main Menu** > **Package Center** to install Audio Station.

To install Audio Station:

Under the **Available** tab, click **Install** to install the package.

---

[1] AirPlay is supported on specific models only. Visit **www.synology.com** for more information.

- If there is only one volume on your DiskStation, you will be asked if you want to run the package after installation. Click **Yes** to continue.
- If there are multiple volumes on your DiskStation, you will be asked to choose from the drop-down menu to specify a destination volume to install the package.
  - **a** Select your destination volume and click **Next**.
  - **b** Tick **Run after installation** if you want to run the package once the installation is complete, and click **Apply** to install the package.

When the installation is complete, the package will be moved to the **Installed** tab and the **Main Menu** will automatically expand with the package's thumbnail on it. Moreover, the **music** shared folder will be created automatically to contain your Audio Station data.

To launch Audio Station:

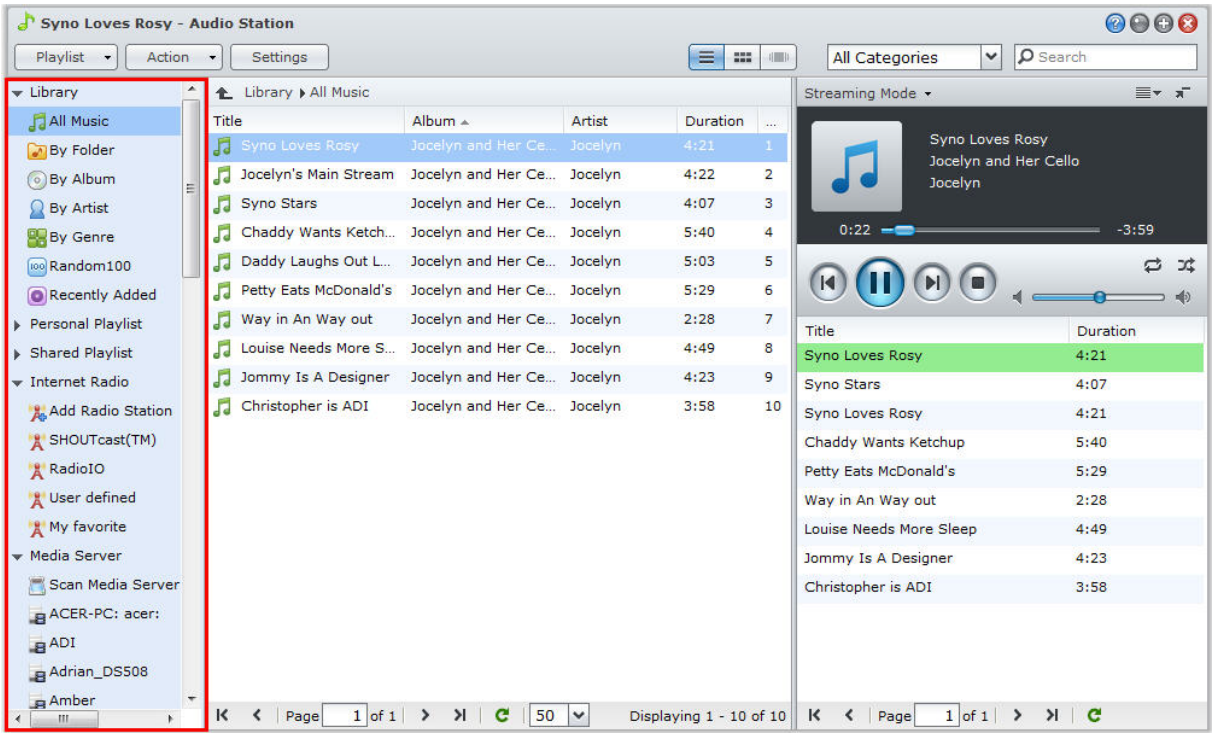
Go to **Main Menu** and click **Audio Station**.

To connect via Mobile Device:

You can download DS audio from Apple's App Store or Android Market to play the music in Audio Station with your iOS and Android device. For more information about DS audio, see "Chapter 18: Communicate with Mobile Devices" on Page 160.

Choose Audio Source

On the left section of Audio Station are several audio sources you can choose from for playback on Audio Station.



Library

The library contains music in the **music** shared folders or any other indexed folders of your Synology DiskStation, which will be organized into the following categories.

To browse your music library, do any of the following:

- Click **All Music** to browse all music in the **music** shared folder.
- Click **By Folder** to browse music by directory.
- Click **By Album** to browse music by the album information of the song.
- Click **By Artist** to browse music by the artist information of the song.

- Click **By Genre** to browse music by the genre information of the song.
- Click **Random100** to browse 100 songs chosen randomly by the system.
- Click **Recently added** to browse the albums that have been recently added.

> ***Note:*** To add a folder as an indexed folder, log in to DSM as **admin** (or a user belonging to the **administrators** group), and then go to **Main Menu** > **Control Panel** > **Media Indexing Service** > **Indexed Folder**. For more information, click the Help button at the top-right corner of the window.

Personal and Shared Playlist

You can click the disclosure triangle next to **Personal Playlist** or **Shared Playlist** to see your personal playlists (viewable by yourself only) or shared playlists (viewable by all DiskStation users with access to Audio Station).

To edit your playlist, do any of the following:

- Select **Refresh** to update all playlists.
- Select **New Playlist** to create a new playlist.

> ***Note:*** Only users with the **Manage Playlist** privilege (in **Settings** > **Privileges** in the top-left corner) can edit or add playlists.

Smart Playlist

You can click the disclosure triangle next to **Smart Playlist** to see your smart playlists.

To refresh your smart playlist:

Select **Refresh** to update all smart playlists.

To add or edit a smart playlist, do any of the following:

- **Add or edit in DSM:**
  - **a** Go to **Main Menu** > **iTunes Server** in Synology DiskStation Manager.
  - **b** Click **Smart Playlist** to add or edit your playlist.
- **Add or edit in Audio Station:** See "Work with Playlist" on Page 110 for more information.

iPod

If there is an iPod classic connected to the USB port of your DiskStation, you can click the disclosure triangle next to **iPod** to see the iPod connected to the USB port on Synology DiskStation.

To refresh iPod contents:

Select **Refresh** to update the iPod contents.

> ***Note:***
>
> - Audio Station only supports iPods formatted by iTunes for Windows.
> - Only users with the **USB/UPnP Renderer** privilege (in **Settings** > **Privileges** in the top left corner) have access to iPod contents.

Internet Radio

Audio Station comes with lists of Internet radio stations provided by **SHOUTCast(TM)** and **RadioIO**. You can also add your radio stations manually.

To add a radio station:

1. Select **Add Radio Station** to open the settings window.
2. Fill in the corresponding information (**Name**, **Description**, and **URL**) to add a radio station to the **User defined** list.

To see the list of radio stations:

1. Select an existing Internet radio provider or **User defined** list.

2 See the details of its radio stations in the main section.

3 Drag your favorite radio stations to **My favorite** for quick access.

Media Server

Audio Station can browse and play media contents on DLNA-certified Digital Media Servers or other Synology DiskStations on the local area network.

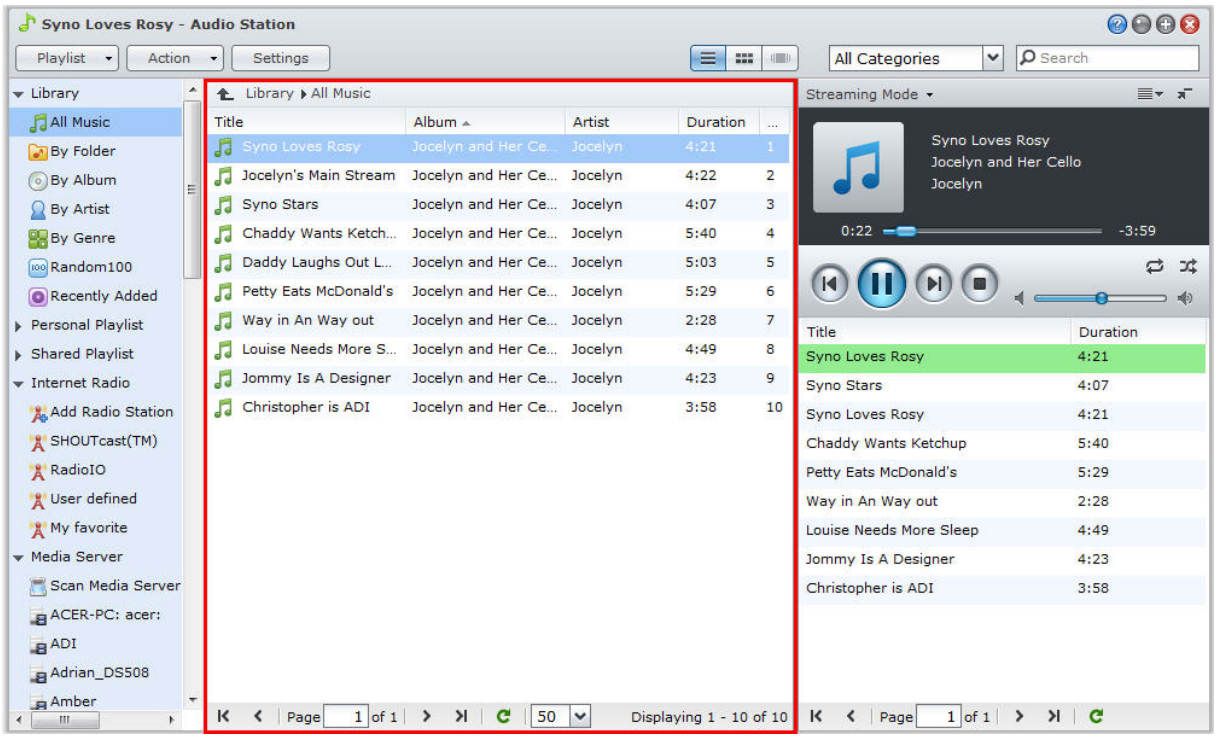
To search for media servers on the local area network:

Select **Scan Media Server** to search for available servers.

> ***Note:*** Only users with the **UPnP Browsing** privilege (in **Settings** > **Privileges** in the top left corner) can play media server contents.

Organize Your Music

After selecting one of the audio sources on the left side, you can browse its contents in the main section of the Audio Station, and organize your favorite music into playlists.



Browse Music

You can change views, see your current location, and use the search field to find your music quickly.

> ***Note:*** If you see unreadable song titles, album names, or artist names while browsing through your music, go to Synology DiskStation Manager to set the correct codepage that matches the language of your computer, and then re-index your music. See "Language" on Page 22 and "Search Music" on Page 109 for more information.

Change Views

By clicking the three buttons above the main section, you can browse your songs in different views.

There are three views to browse your songs:

- **List** (the first button): Organize your items in a list.
- **Icon** (the second button): The icons or artwork (if any) of your songs or folders appear in the main section.

- **Cover Flow** (the third button): All icons/artwork and song/directory names appear using Cover Flow, a fancy way to flip through your library.

> ***Note:***
> - **Cover flow** is available only when browsing the library using **By Album** or **By Artist**.
> - Only when music files are in the following formats can their cover art be displayed in Audio Station: MP3, M4A.

See Your Current Location

You can use the **Up** icon (with an upward arrow) or any of the path names above the main area to go back to previous directories.

To go back to a previous directory, do any of the following:

- Click the **Up** button to go back to the last directory.
- Click any of the path names to the right of the **Up** icon to go back to a previous directory.

Search Music

You can use the search field above the music player section of Audio Station to search your music.

To search music:

1. Choose a category from the **All Categories** drop-down menu.
2. Enter a word or phrase in the search field.
3. Press Enter (PC) or Return (Mac) on your keyboard.

The search result will appear in the main section.

To filter the artist, album, or genre to show in the main section:

When you are at the root directory of **By Album**, **By Artist**, or **By Genre**, you can see the **Filter** field above the main area of Audio Station. Enter a keyword in the field and press "Enter" on your keyboard to quickly find the album, artist, or genre you want, depending on your current location.

To re-index audio files:

1. Go to **Main Menu** > **Control Panel** > **Media Indexing Service**.
2. Under the **Media Indexing Service** tab, click **Re-index** to reconstruct the index structure of the audio files If you found missing music in Audio Station. The process will be executed in the background.

Edit Music Information

With Audio Station, you can view or edit the information of music files.

To view or edit music information:

1. Select one or more music files, and right-click to choose **Edit music tag**.
2. Here you can view or modify the music file's information, or choose a language from the **Codepage** drop-down menu to convert non-Unicode text to Unicode and display the text in the correct language. (**System default** is the codepage you specified at **Main Menu** > **Control Panel** > **Regional Options**.)
3. Click **Save** to finish the setup.

> ***Note:***
> - You can only edit music files in the following formats: mp3, wma, wav, ogg.
> - Only users with the **Edit Music Tag** privilege (in **Settings** > **Privileges** in the top left corner) can edit music information.

Display Additional Attributes

You can display additional attributes of your music to show them in new columns of the main section.

To display additional attributes:

1. Hover the pointer over any column header of the main section, and click the downward arrow that appears to the right of the header.

2 From the pop-up menu, choose the **Columns** submenu.

3 Tick the checkboxes next to the extra attributes to show them in new columns.

Work with Playlist

You can organize your songs into playlists to categorize and access your favorite music more easily.

There are two types of playlists: **Personal playlist** (viewable by the DiskStation user who creates the playlist) and **shared playlist** (viewable by all DiskStation users with access to Audio Station).

To create a playlist, do any of the following:

- **Method 1:**
  - **a** Click **New Playlist** under **Personal Playlist** or **Shared Playlist** to create an empty playlist.
  - **b** While browsing through the library, select any songs/radio stations in the main section.
  - **c** Drag the selected songs/radio stations to the playlist you just created.
- **Method 2:**
  - **a** While browsing through your library, select any songs/radio stations you want in the main section.
  - **b** Drag the selected songs/radio stations to **New Playlist** below **Personal Playlist** or **Shared Playlist**.
- **Method 3:**
  - **a** Go to **Playlist** > **New Playlist** at the top-left corner to create an empty personal playlist. (if you want to create a shared playlist, tick **Add as shared playlist**.)
  - **b** While browsing through the library, select any songs in the main area, and then drag them to the playlist you just created.

To create a smart playlist:

1 Go to **Playlist** > **New Smart Playlist** at the top-left corner to create a personal smart playlist.

2 Name the playlist and click **OK**.

3 In the window that appears, click **Add Rule** to set the rules, and click **OK**.

4 You will see the new smart playlist under **Personal Playlist** on the left panel.

Note:

- You cannot add folders to playlists.
- You can also add songs from the queue to a new playlist. See "About the Output Modes and the Queue Panel" on Page 111 for more information.
- DSM administrators (DSM **admin** or a user belonging to the **administrators** group) can create shared smart playlists by going to DSM's **Main Menu** > **iTunes Server** and clicking the **Smart Playlist** button.

To rename or remove a playlist:

Right-click the playlist and choose **Rename** or **Delete**.

To adjust the order of songs in a playlist, do any of the following:

- Select songs in the main section and click **Up** or **Down** on the top to move them up or down in the playlist.
- Select and drag the songs up or down in the main section.

To remove songs from a playlist:

Press and hold Shift or Ctrl while making multiple selections, and right-click to choose **Delete**.

To copy a shared playlist to a personal playlist and vice versa:

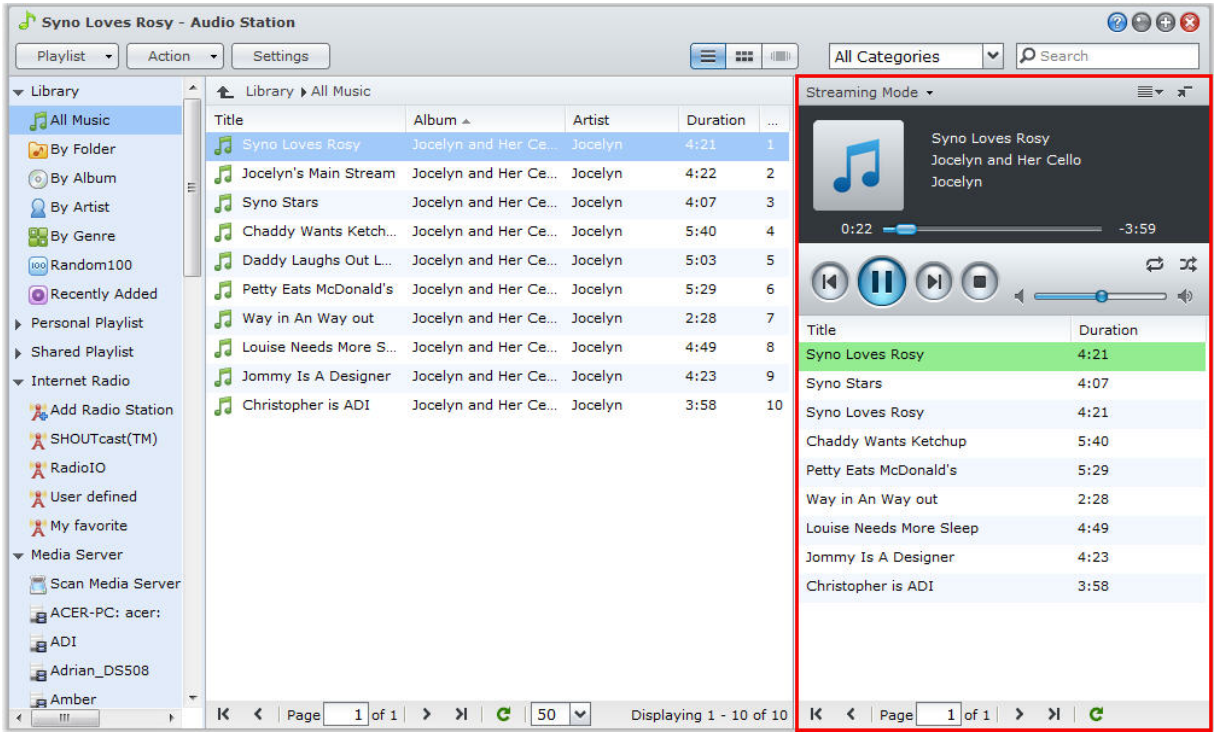
Right-click the playlist and choose **Copy to personal playlist** or **Copy to shared playlist**.

To edit the rules of a smart playlist:

Right-click the playlist and choose **Edit smart playlist** to modify the rules.

Play Music

The right side of Audio Station consists of the queue panel and the music player. You can play the music added to the queue with the music player.



About the Output Modes and the Queue Panel

To play music via different devices, you can add songs to the different output modes in the queue panel.

The output modes include the following:

- **Streaming Mode**: Stream music to your computer for playback via the speakers of your computer.
- **USB Mode**: Play music via the USB speakers connected to the USB port of your Synology DiskStation, or via external speakers or home stereo equipment connected to the audio dock of Synology Remote (sold separately).
- **Media Renderer**: Play music via a Digital Media Renderer (DMR) or an AirPlay[1] compatible device within your local area network.

> ***Note:***
>
> - **USB Mode** and **Media Renderer** mode are available only when corresponding output devices are found by Audio Station.
> - If you play music via the Optical S/PDIF Output port on the audio dock of Synology Remote, adjust the remote volume to maximum to achieve best audio quality.
> - For more information about Synology Remote, visit www.synology.com.

To switch between output modes:

Choose any of them from the drop-down menu at the top of the music player.

> ***Note:*** You can play music in different modes at the same time.

[1] AirPlay is supported on specific models only. Visit www.synology.com for more information.

Add Music to Queue

You can add your songs from the library to the queue panel on the right side for playback.

To add your songs from the library to the queue panel, do any of the following:

- Double-click an item in the main section to add it to the queue and start playing it right away.
- Select one or more items in the main section, and then drag them to the queue.
- Select one or more items in the main section, right-click and choose **Add selections to queue** to add selected songs to the queue.
- Right-click an item and choose **Add all to queue** to add all items in the same directory to the queue.

Add a Playlist to Queue

You can add or append playlists to the queue panel on the right side for playback.

To add a playlist to the queue and replace the existing songs in the queue:

Right-click the playlist and choose **Play**. Audio Station will play the songs in the playlist immediately.

To append a playlist to the queue without replacing the existing songs in the queue:

Right-click the playlist and choose **Add to queue**.

Manage Songs in the Queue Panel

To play a song in the queue:

Right-click the song and choose **Play** to play it right away.

To adjust the order of songs in the queue, do any of the following:

- Select and drag the songs up and down in the queue.
- Select the song, right-click one of them, and choose **Up** or **Down**.

To add all songs in the current queue panel to a new playlist:

Right-click any of the songs and choose **Save playing queue**.

To remove a song from the queue:

Select the song, right-click and choose **Remove**.

To remove all songs from the queue:

Right-click any of the songs and choose **Remove all**.

> ***Note:*** Only users with the **USB/UPnP Renderer** privilege (in **Settings** > **Privileges** in the top left corner) can play music through USB devices or UPnP renderers.

Play Music with Music Player

You can play the music added to the queue with the music player.

The upper part of the music player displays the information of the currently playing music, including the song's title, album, artist, and duration. The lower part contains the controls you can use to control music playback.

To play a song:

Click **Play/Pause**, **Next**, or **Previous**.

To skip to any point in the currently playing song:

Drag the playhead along the timeline (below the song's duration) to any point you want.

To adjust the volume:

Drag the volume slider below the timeline.

To repeat all songs or currently playing song in the queue, or turn off repeat:

Click the **No repeat, repeat all, or repeat one** button (the first button from the left in the lower-right corner of the music player).

To play the songs in the queue in random order:

Click **Shuffle on/off** (the second button from the left in the lower right corner of the music player).

To customize sound frequencies with equalizer (USB mode only):

Click the **EQ** button to open the equalizer, tick the checkbox, and choose a preset from the drop-down menu. You can also drag the sliders and save your own **User Defined** preset.

Play Music with Mini Player

Click the **Switch to mini player** button at the top-right corner of the music player.

To play a song:

Click **Play/Pause**, **Next**, or **Previous**.

To skip to any point in the currently playing song:

Drag the playhead along the timeline (below the song's duration) to any point you want.

To adjust the volume:

Drag the volume slider below the timeline.

To switch back to the full mode:

Click the **Switch to full mode** button at the bottom-right corner of the mini player.

Manage Transcoder

Managing transcoder will allow Audio Station to support more audio formats under streaming mode. The following audio formats will be transcoded if your browser does not support them: FLAC, APE, AAC, OGG, AIFF, WMA.

To manage transcoder:

1 Go to **Settings** > **Transcoder**.

2 Choose any of the following options (available on specific models only):

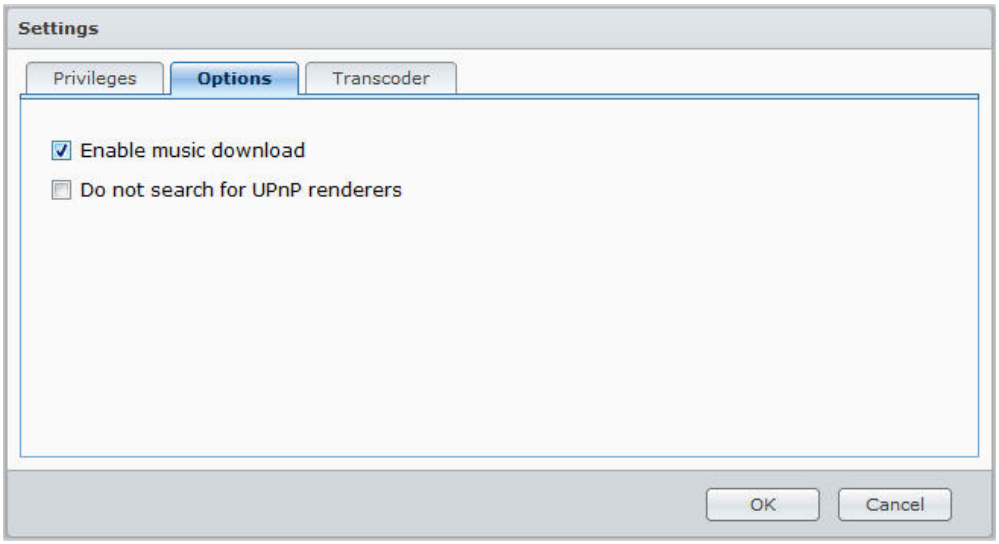
- **Transcode to WAV format**: WAV format is supported on specific browsers only. (Firefox 3.6 and above, Safari 5, Opera 10.60)
- **Transcode to MP3 format**: By transcoding to MP3, you enjoy better browser support. However, this also occupies more system resources. In addition to the formats listed above, WAV format will also be transcoded to MP3 when this option is selected.

3 Click **OK**.

> ***Note:*** The **Transcoder** options are available on specific models only.

Download Music

You can enable music download and then download songs from Audio Station to your local computer.



To enable music download:

1 Click **Settings** and then click the **Options** tab.

2 Tick **Enable music download**.

3 Click **OK**.

To download music, do any of the following:

- Select multiple songs by holding Ctrl key and right-click to choose **Download selected song(s)**.
- Right-click any of the songs in the queue panel, and choose **Download playing queue**.
- Right-click any playlist and choose **Download playlist**.

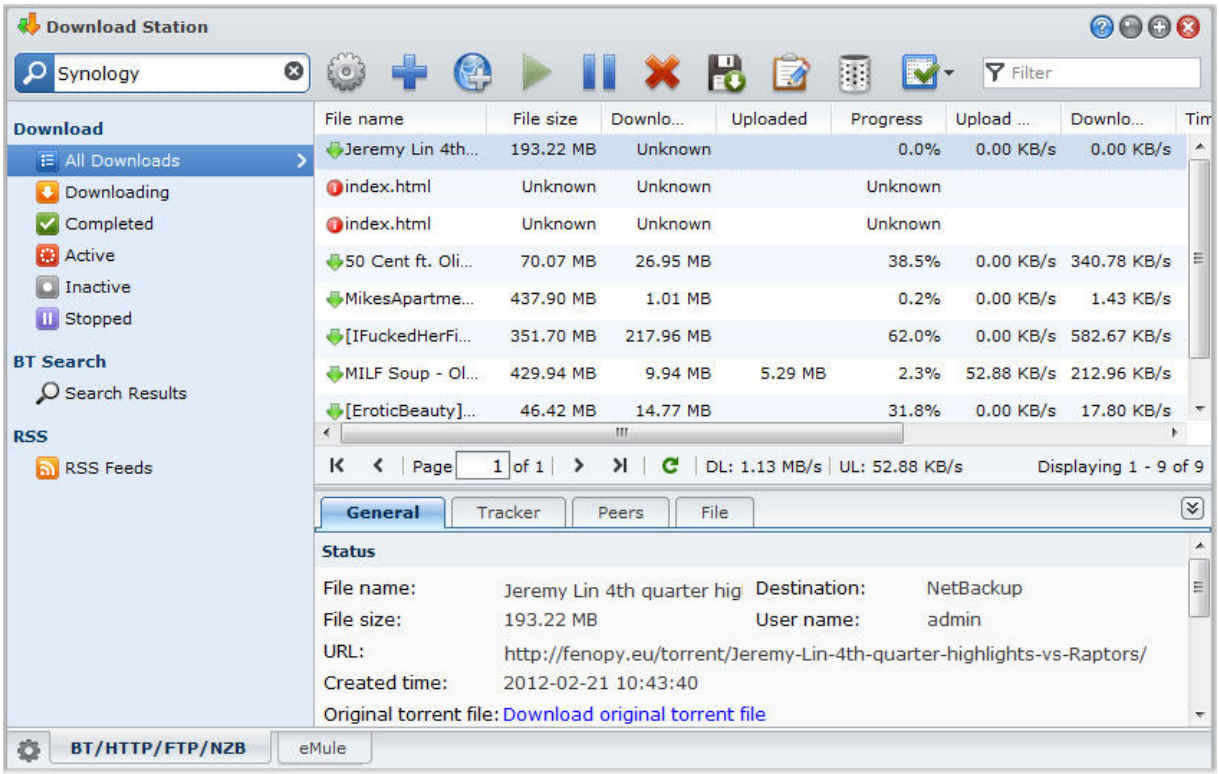
Chapter

14

Download Files with Download Station

Download Station is a web-based download application, allowing you to download files from the Internet through BT, FTP, HTTP, NZB and eMule. With Download Station, you can download files from file hosting sites, and search for torrent files via system default search engines as well as self-added ones with the BT search function.

This chapter explains how to enable Download Station and manage download tasks.



Install Download Station

Go to **Main Menu** > **Package Center** to install Download Station.

To install Download Station:

Under the **Available** tab, click **Install** to install the package.

- If there is only one volume on your DiskStation, you will be asked if you want to run the package after installation. Click **Yes** to continue.
- If there are multiple volumes on your DiskStation, you will be asked to choose from the drop-down menu to specify a destination volume to install the package.
  - **a** Select your destination volume and click **Next**.
  - **b** Tick **Run after installation** if you want to run the package once the installation is complete, and click **Apply** to install the package.

When the installation is complete, the package will be moved to the **Installed** tab and the **Main Menu** will automatically expand with the package's thumbnail on it.

To launch Download Station:

- Go to **Main Menu** and click **Download Station**.

- Type the following web address in the address bar of your web browser:
  http://Synology_Server_IP_Address/download/

To enable eMule downloads:

1 Click the gear icon at the bottom-left corner of Download Station, and then tick **Enable eMule downloads**.

2 If there are multiple volumes on your DiskStation, you can choose from the drop-down menu to specify the temporary location for storing the files that are being downloaded.

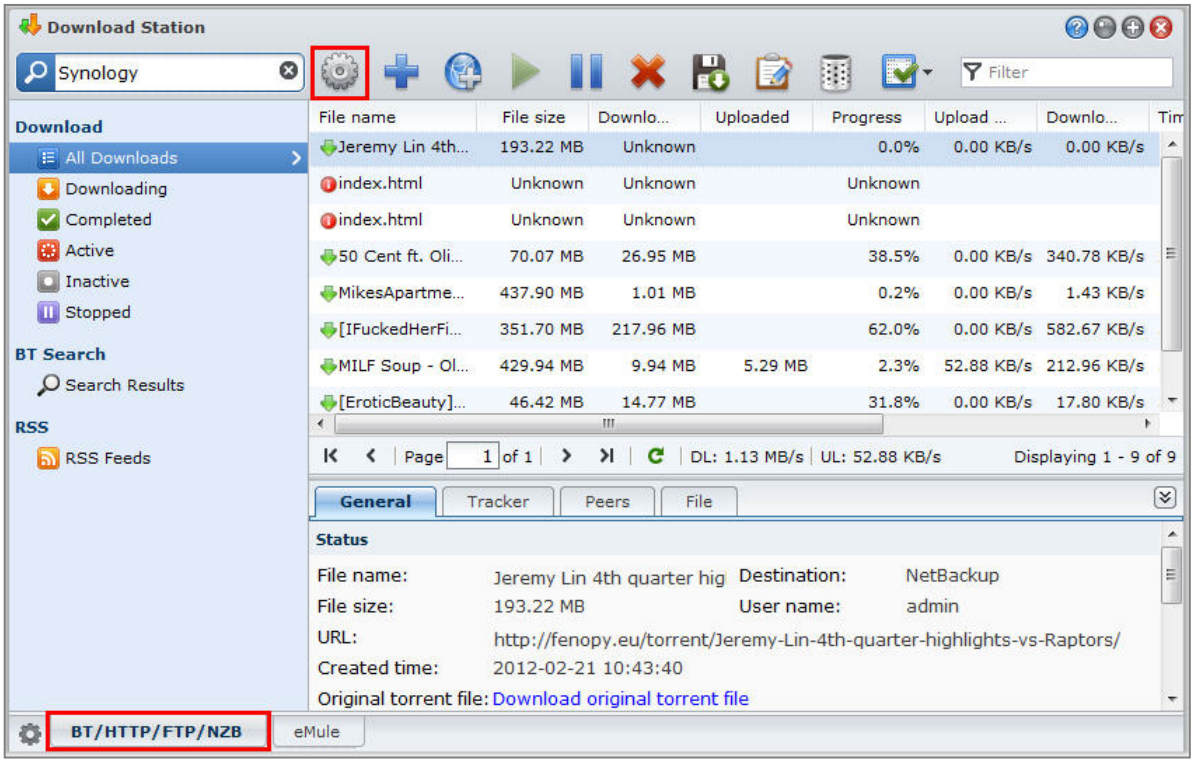
3 Click **OK**.

To go to the BT/HTTP/FTP/NZB or eMule section of Download Station:

After launching Download Station, click the **BT/HTTP/FTP/NZB** or **eMule** tab at the bottom of Download Station.

Set up BT/HTTP/FTP/NZB

Click the **BT/HTTP/FTP/NZB** tab at the bottom of Download Station, and click the gear icon next to the search field at the top to manage the following settings of BT/HTTP/FTP/NZB.



Note: For detailed information about BT/HTTP/FTP/NZB settings, open **DSM Help** and then go to **Download Station** > **BT/HTTP/FTP/NZB** > **Set up BT/HTTP/FTP/NZB**.

General

In this section, you can set download schedule, prioritize process order, and enable notification.

Download Schedule

You can limit BT/HTTP/FTP/NZB's download tasks to certain time period of a week and alternative speeds, so that you can free up more network bandwidth when needed.

To set the download schedule:

1 Choose any of the following:

- **Immediately**: Allow download tasks to continue without stop.
- **Advanced schedule**: Click **Schedule Plan** and do the following:

a If you want to limit download tasks to alternative speeds during certain periods of a week, enter the maximum download or upload rates in the **BT Alternative Speed Settings** section. ("0" means unlimited.)

b Choose any of the following and click on the grid to limit download tasks' time or speeds to certain period of a week:

a **No Download**: Do not download or upload files.

b **Default Speed**: Download or upload files at the default maximum speeds.

c **Alternative Speed**: Download or upload files at the maximum speeds you specified in the **BT Alternative Speed Settings** section.

2 Click **OK**.

Note: Downloading or uploading files at alternative speeds is available for BT tasks only.

Process Order

Do the following to sort the order of download tasks:

1 Choose any of the following:

- **By date created**: Sort the order of download tasks by the date they are added.
- **By user (one task at a time)**: Sort the order of download tasks by the users who added the download tasks.

2 Click **OK**.

Note: Choosing **By user** can improve the fairness among users, so it is recommended when more than one user are downloading files.

Notification

You can have Download Station send email or desktop notifications when a task is completed.

Before you start:

For the setting to take effect, you must go to **Main Menu** > **Control Panel** > **Notification** and enter the SMTP settings.

To enable email notification:

1 Tick **Send email notification upon task completion**.

2 Click **OK**.

To enable desktop notification:

1 Tick **Display desktop notification upon task completion**.

2 Click **OK**.

Location

In this section, you can specify download destination folder and torrent/NZB watched folder.

Default Destination Folder

Specify a folder that will be used to store files downloaded via BT/HTTP/FTP/NZB.

To specify the default destination folder:

1 Click **Select** and choose a folder.

2 Click **Select**.

3 Click **OK**.

Torrent/NZB Watched Folder

Specify a watched folder which will be monitored by Download Station to create download tasks automatically for any torrent/NZB files within that folder.

To specify a watched folder:

1 Tick **Load torrent/NZB file(s) from watched folder automatically**.

2 If you want to delete torrent/NZB files after download tasks have been created for those files, tick **Delete loaded torrent/NZB files**.

3 Click **Select** and choose a folder.

4 Click **Select**.

5 Click **OK**.

File Hosting

There are many online file hosting and media sharing websites, where users can upload and share the files or multimedia contents with other people. With Download Station, you can download files from those websites. For more information about downloading files from those websites with your premium or free membership information, click the **Help** button (with a question mark) at the top-right corner, go to **Download Station** > **Set up BT/HTTP/FTP/NZB**, and refer to the **File Hosting** section.

BT

In this section, you can edit the following settings for downloading BT files.

To specify the TCP port number:

Enter “6881” at the **TCP Port** field. By default, the port is 6881. It can also be set from 1 to 65535 manually by the administrator.

> ***Note:*** You cannot use the following port number for BT access, because they are reserved for system use:
>
> - **Port Number:** 20, 21, 22, 23, 25, 80, 110, 137, 138, 139, 143, 199, 443, 445, 515, 543, 548, 587, 873, 993, 995, 3306, 3689, 5000, 5001, 5005, 5006, 5335, 5432, 9997, 9998, 9999
> - **FTP default port range**: The actual range may vary depending on different models.

To set up BT upload and download rates:

Enter the maximum upload and download rate for BT downloads and uploads in the **Max. upload rate** or **Max. download rate** fields. ("0" means unlimited.)

BT Network Setting

See below for more advanced BT settings.

To encrypt BT traffic:

1 Choose any of the following from the **BT protocol encryption** drop-down menu:

- **Disable**: Disable outgoing encrypted connections, but will accept incoming encrypted connections.
- **Auto**: Attempt to accept incoming encrypted connections, but will fall back to an unencrypted mode if connection fails.
- **Always**: Always accept incoming encrypted connections and use outgoing encrypted connections.

2 Click **OK**.

To set maximum number of peers for each BT task:

1 Enter a number in the **Max. peers allowed per torrent file** field. ("Peers" are BT clients currently sharing the same files over the network.)

2 Click **OK**.

To enable DHT for BT network:

1 Tick **Enable DHT network**, and then change the default **DHT UDP port** setting if necessary.

2 Click **OK**.

Auto Stop Task

The BT download task will continue seeding even when the task is finished. This setting allows you modify the share ratio and seeding interval for the download task.

> ***Note:*** Download Station will stop tasks when both criteria are met.

BT Search

In this section, you can see a list of default BT search engines. When you use the **BT Search** function to search for torrent files, Download Station will list search results provided by these search engines.

You can also click **Add** and upload a BT search engine plug-in to add your favorite BT search engines to the list.

FTP / HTTP

In this section, you can set the number of simultaneous connections to one FTP server, and limit the maximum download rate of each FTP task.

NZB

Download Station allows you to download files via a news server. The news server information must be assigned before downloading NZB files.

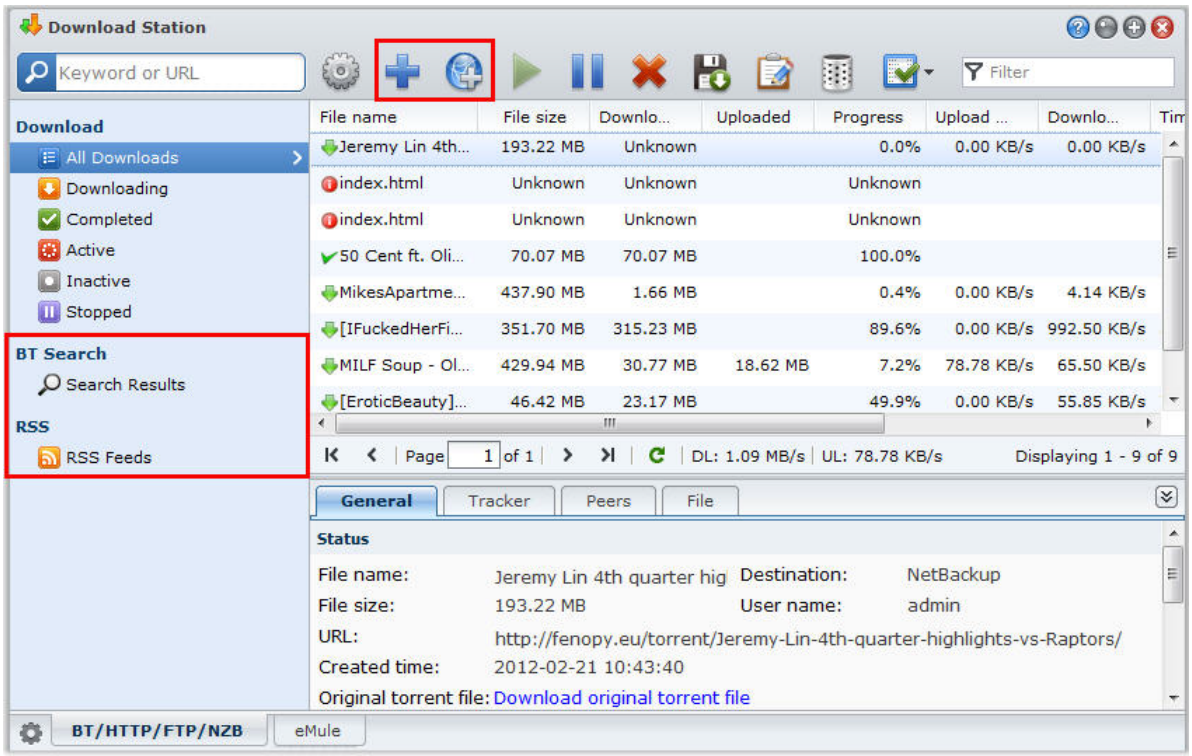
The maximum connections is usually limited by your news server, you can also limit maximum connections to each NZB task by giving it a value.

RSS

For RSS download tasks, you can choose from the **Update interval** drop-down menu to shorten the update interval from 24 hours to your preferred time period.

Create BT/HTTP/FTP/NZB Download Tasks

This section explains how to create BT/HTTP/FTP/NZB tasks.



Create by Uploading Files

You can create download tasks by uploading the following files from your local computer to Download Station:

- Torrent files (.torrent) contain information for downloading files being shared over the BT network.
- NZB files (.nzb) contain information for retrieving posts from news servers.
- URL files (.txt) contain a list of HTTP/FTP URLs for downloading the linked files.

To create download tasks by uploading files:

1 Do any of the following:
   - Click the **Create** button, click the button next to **Open a file**, and browse to the files for upload. (If you have installed Flash Player 9 or later, you can make multiple selections.)
   - Select the files on your computer's desktop or file explorer (for example, Windows Explorer or Mac Finder), and then drag and drop them into Download Station.
2 Change your download destination, or tick the checkbox to show BT information (for ".torrent" files only) according to your preferences.
3 Click **Create**.

> ***Note:***
> - You can upload up to 20 files at a time.
> - Drag-n-drop files from computer's desktop or file explorer is supported on specific browsers only: Chrome, Firefox 4 or onwards

Create by Entering URLs

You can create download tasks by entering URLs.

To create download tasks by entering URLs:

1 Click **Add**.
2 In the window that appears, enter the URLs of the file you want to download. You can enter up to 50 URLs in the box.

> ***Note:***
> - If you want to download a FTP folder, simply enter the FTP link with the forward slash (/) at the end of the link. All of the files and sub-directories in the folder will be downloaded.
> - SFTP/FTPS folder downloading is not supported.

3 If authentication is required, tick **Authentication required** and enter your username and password.
4 If you want to change your download destination, click **Select** to select another folder.
5 Click **Create**.

Create via BT Search

You can search for torrent files with BT search engines to help you find your favorite downloads more easily.

> ***Note:*** Before you use the **Search** function, make sure you have enabled at least one search engine at **Settings** > **BT Search**. See "BT Search" on Page 119 for more information.

To create download tasks via BT search:

1 Enter a keyword in the search field at the top-left corner of BT/HTTP/FTP/NZB, and press "Enter" on your keyboard to start searching.
2 Click **Search** on the left panel. The search result of available files will be listed in the main area.
3 Make your selections, and then click any of the following buttons to create download tasks:
   - **Download immediately**: Download the selected files to the default destination folder you specified at **Settings** > **Location**. See "Location" on Page 117 for more information.
   - **Download to**: Change destination folder and modifies the torrent file's URL or authentication (if required). Click **Create** to create the download task.

Create Download Tasks for RSS Feeds

You can use Download Station to download RSS feeds.

More Information

What is RSS?

RSS (Really Simple Syndication, also known as RSS feed) is an alternative way of web browsing. Web publishers often use RSS feeds to publish frequently-updated works, such as blog entries, news headlines, podcasts, photo albums, or audio/video clips.

Can Download Station download all kinds of RSS feeds?

RSS files on the website of BT search engines and iTunes podcasts are generally supported by Download Station.

Some download links in the RSS file are links to a web page rather than the actual file. This kind of RSS files will not be supported. To view and update their RSS feeds, you can use a RSS reader (such as Google Reader) instead.

To view and update the list of RSS feeds:

1 Right-click the RSS icon on a webpage to copy the URL of the RSS file.

2 Launch Download Station and click **RSS Feeds** on the left panel. You can see the file list in the main area.

3 Click the **Add** button above the file list.

4 In the window that appears, paste the URL into the text field and click **OK**. (If you tick **Automatically download all items**, Download Station will automatically add all RSS feeds listed in the RSS file to download tasks.) The RSS file is now added to the file list. You can rename or remove the RSS file by clicking the **Rename** or **Remove** button above the file list.

5 Select the RSS file and view the list of its RSS feeds under the **RSS Feeds** tab.

6 Click **Update** above the file list to update the list of RSS feeds for the selected RSS file, or click **Update All** to update the lists of RSS feeds for all RSS files in the file list.

Note: By default, Download Station automatically updates the lists of RSS feeds on a daily basis. You can go to **Settings** > **RSS** to shorten the update interval.

To create download tasks by selecting RSS feeds:

1 Click **RSS Feeds** on the left panel, and then select the RSS file containing feeds you want to download.

2 From the list of RSS feeds under the **RSS Feeds** tab, select the feeds you want to download.

3 Click the **Download** button below the **RSS Feeds** tab to create download tasks for the selected RSS feeds.

To create download tasks by setting download filter:

1 Click **RSS Feeds** on the left panel, and then select the RSS file containing feeds you want to download.

2 Under the **Download Filter** tab, click **Add**.

3 In the window that appears, enter the following information and click **OK** to create a filter:

- **Name**: The name of the filter
- **Matches**: The keyword for searching RSS feeds with matching names
- **Does not match**: The keyword for excluding RSS feeds with matching names
- **Destination**: The destination folder for the downloaded RSS feeds

4 You will see the new filter under the **Download Filter** tab. Click **Edit** or **Delete** if you want to edit or delete the filter.

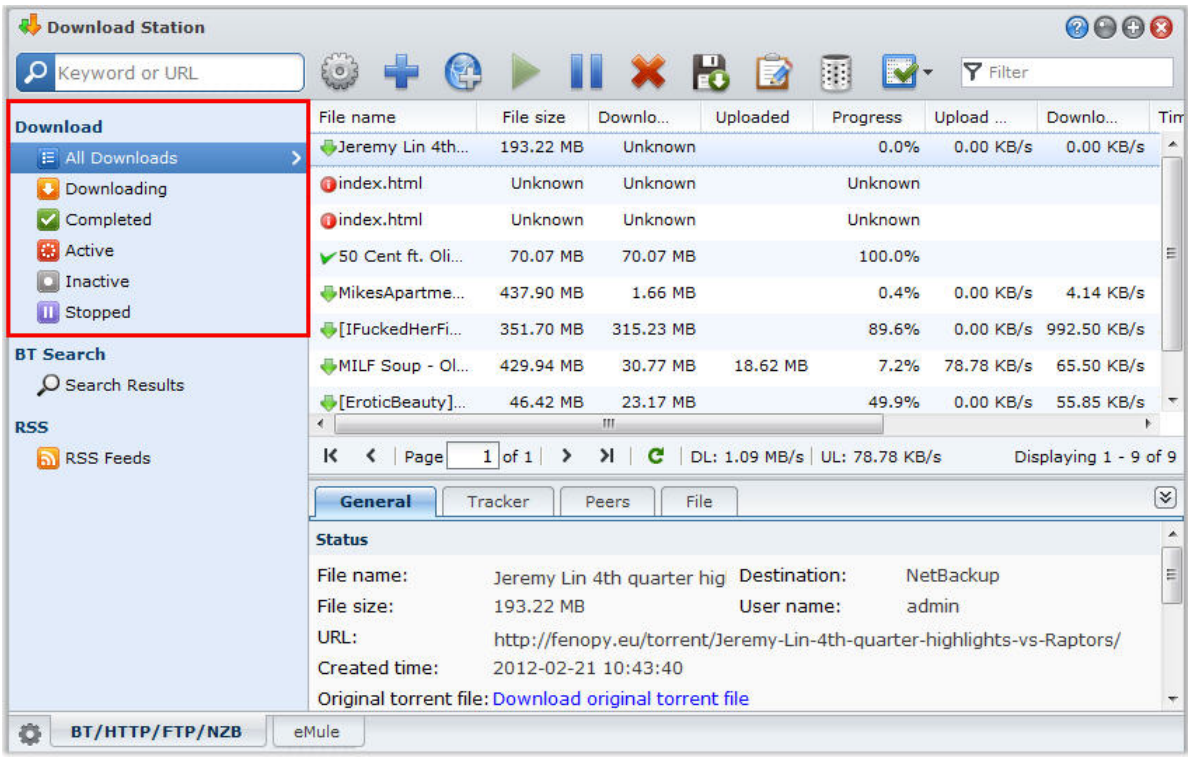
5 When the list of RSS feeds is updated, Download Station will automatically create download tasks for newly-added RSS feeds matching the criteria set in **Download Filter**.

Note:

- If you leave **Matches** and **Does not match** blank, Download Station will create download tasks for all newly-added RSS feeds.
- **Download Filter** only works for newly-added feeds. Original RSS feeds on the list can only be downloaded using the **Download** button below the **RSS Feeds** tab.

Manage BT/HTTP/FTP/NZB Download Tasks

You can check and manage the download tasks you just created.



View BT/HTTP/FTP/NZB Tasks

Click any of the following on the left panel to view BT/HTTP/FTP/NZB tasks:

- **All Downloads** lists all download tasks.
- **Downloading** lists download tasks that are currently downloading.
- **Completed** lists download tasks that are completely downloaded.
- **Active Downloads** lists download tasks that are currently downloading or seeding.
- **Inactive Downloads** lists download tasks that are erroneous, waiting, or paused by you.
- **Stopped** lists download tasks that are paused by you.

Manage BT/HTTP/FTP/NZB Tasks

While checking BT/HTTP/FTP/NZB tasks, you can use the buttons along the top of download queue and the tabs below the queue to manage your tasks.

To pause/resume/remove download tasks:

1 Select the download task(s) you want to pause, resume, or remove.

2 Click **Pause** or **Resume** or **Remove**.

To end an incomplete or erroneous download task:

1 Select the download task you want to end.

2 Click **End incomplete or erroneous download tasks**.

3 Click **OK** to end the task and the files will be moved to your destination shared folder.

> ***Warning:*** You cannot resume/restart the task after completing this action.

To edit download tasks:

1 Click **Edit** to customize the general settings (auto stop task, maximum upload/download rate, maximum peers allowed per torrent file) and tracker lists for the current task.

2 Click **OK**.

> ***Note:***
>
> - To edit the default setting for all download tasks, refer to "Set up BT/HTTP/FTP/NZB" on Page 116.
> - The maximum upload/download rates and the maximum peers allowed per torrent file cannot exceed the default setting.

To clear finished download tasks:

Click **Clear completed items**. Downloaded files will remain in the destination shared folder.

To change the list order of download tasks:

Click on the column headings. Default ordering is by the creation date of the download tasks.

To view detailed information about a download task:

1 Select the download task you want to view.

2 Click any of the following tabs below the download queue to view detailed information of the task. (If you cannot see the tabs, click the upward triangle at the bottom right corner of Download Station.)

- **General** displays general information of the download task.
- **Tracker** (BT tasks only) lists servers that track other BT clients sharing the same files over the network. You can add or remove trackers by clicking **Add** or **Remove**.
- **Peers** (BT tasks only) lists other BT clients sharing the same files over the network.
- **File** (BT/NZB tasks only) lists files to download for the current task. For BT tasks, you can set download priority for each file or skip downloading certain files.
- **Log** (NZB tasks only) records the download progress of files.

Troubleshooting

When error(s) occur, all action buttons will be disabled. You can enable the action buttons by checking for the possible errors:

- Download Station is disabled.
- The network is down.
- Download destination not set.
- Your account is disabled or removed.
- Unknown Error.
- If the problem still exists after checking the above list of possible errors, consult the Administrator.

Set up eMule

eMule downloading is not enabled by default. You will need to enable eMule before configuring its settings.

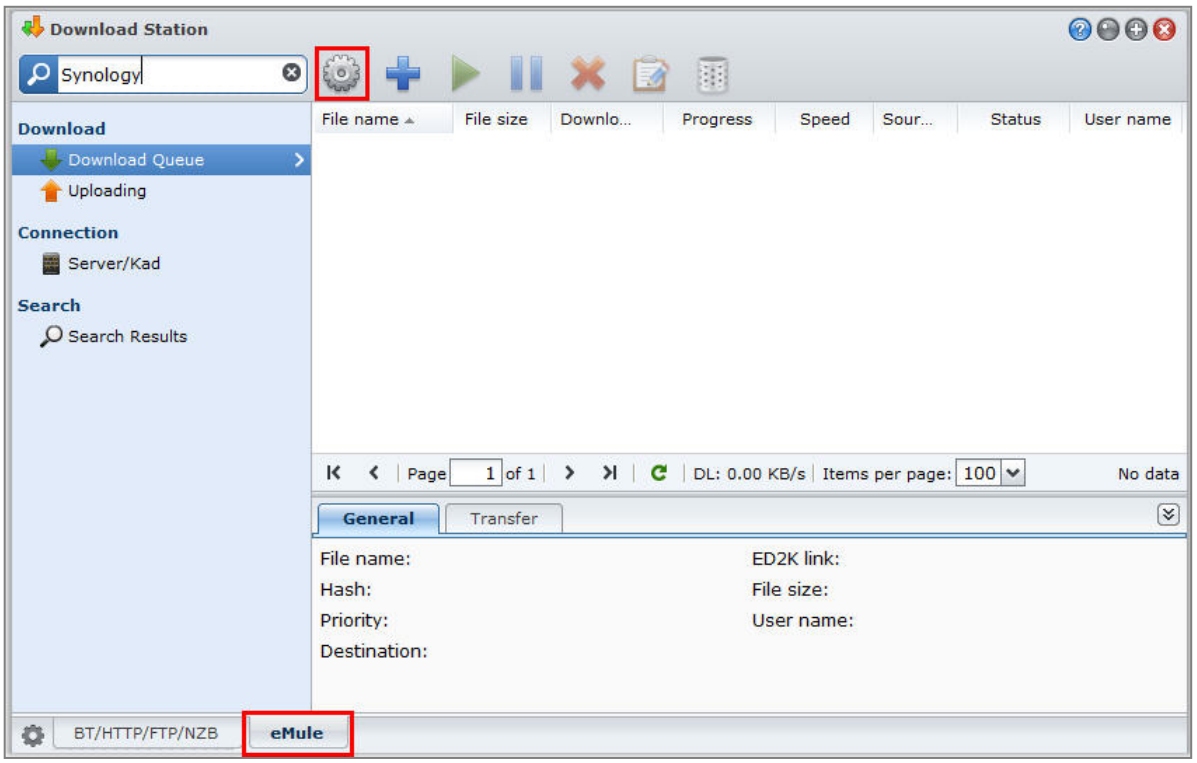
To enable eMule:

1 Click the gear icon at the bottom-left corner of Download Station, and then tick **Enable eMule downloads**.

2 If there are multiple volumes on your DiskStation, you can choose from the drop-down menu to specify the temporary location for storing the files that are being downloaded.

3 Click **OK**.

Now you can click the **eMule** tab at the bottom-left corner of Download Station, and then click the gear icon next to the search field at the top of Download Station to manage the following settings of eMule.



Note: For detailed information about eMule settings, open DSM Help and then go to **Download Station** > **eMule** > **Set up eMule**.

General

In this section, you can manage the settings of ED2K server, notification, and protocol obfuscation.

Server

You can manage server settings with the options to update server list or/and connect to server automatically.

To manage server settings:

1 Tick any of the following:

- **Automatically update server list when connected to a server or client** allows you to retrieve server lists from other servers or eMule clients.
- **Connect to server automatically** allows Download Station to connect to ED2K server automatically.

2 Click **OK**.

Note: See "Connect to ED2K Server/Kad" on Page 126 for more information about ED2K servers.

Notifications

You can have Download Station send email or desktop notifications when a task is completed.

Before you start:

For the setting to take effect, you must go to **Main Menu** > **Control Panel** > **Notification** and enter the SMTP settings.

To enable email notification:

1 Tick **Send email notification upon task completion**.

2 Click **OK**.

To enable desktop notification:

1 Tick **Display desktop notification upon task completion**.

2 Click **OK**.

Protocol Obfuscation

When this function is enabled, the server will accept incoming connections that is using protocol obfuscation. Administrators can also choose to use obfuscation for outgoing connections or only accept obfuscated connections.

Connection

In this section, you can set up connection for eMule downloads.

Port

By default, the eMule TCP port is 4662 and the UDP port is 4672. It can also be set from 1 to 65535.

> ***Note:*** The TCP port should exclude the following ports:
>
> - **Port Number**: 20, 21, 22, 23, 25, 80, 110, 137, 138, 139, 143, 199, 443, 445, 515, 543, 548, 587, 873, 993, 995, 3306, 3689, 5000, 5001, 5005, 5006, 5335, 5432, 6881, 8080, 7000, 7001, 8081, 9997, 9998, 9999, 50001, 50002
> - **FTP default port range**: The actual range may vary depending on different models.

Connection

When this function is enabled, the server will limit the maximum TCP/IP and UDP connections. A connection will be established only when there are tasks in progress such as: data transferring, file searching or source exchanging.

> ***Note:*** The max. connections should be between 100 and 500. A large number of max. connections will consume more system resources and a small number of min. connections will lower the overall downloading performance.

Location

In this section, you can set the default destination folder for eMule, and share your files on the ED2K network.

To set the download destination folder for eMule:

1 Click **Select** and choose a folder.

2 Click **Select**.

3 Click **OK**.

To specify folders you want to share with other eMule clients:

1 Click **Select** and choose a folder.

2 Click **Select**.

3 Click **OK**.

Bandwidth

In this section, you can set upload and download rates and download schedule to limit download and upload bandwidths.

To set upload and download rates:

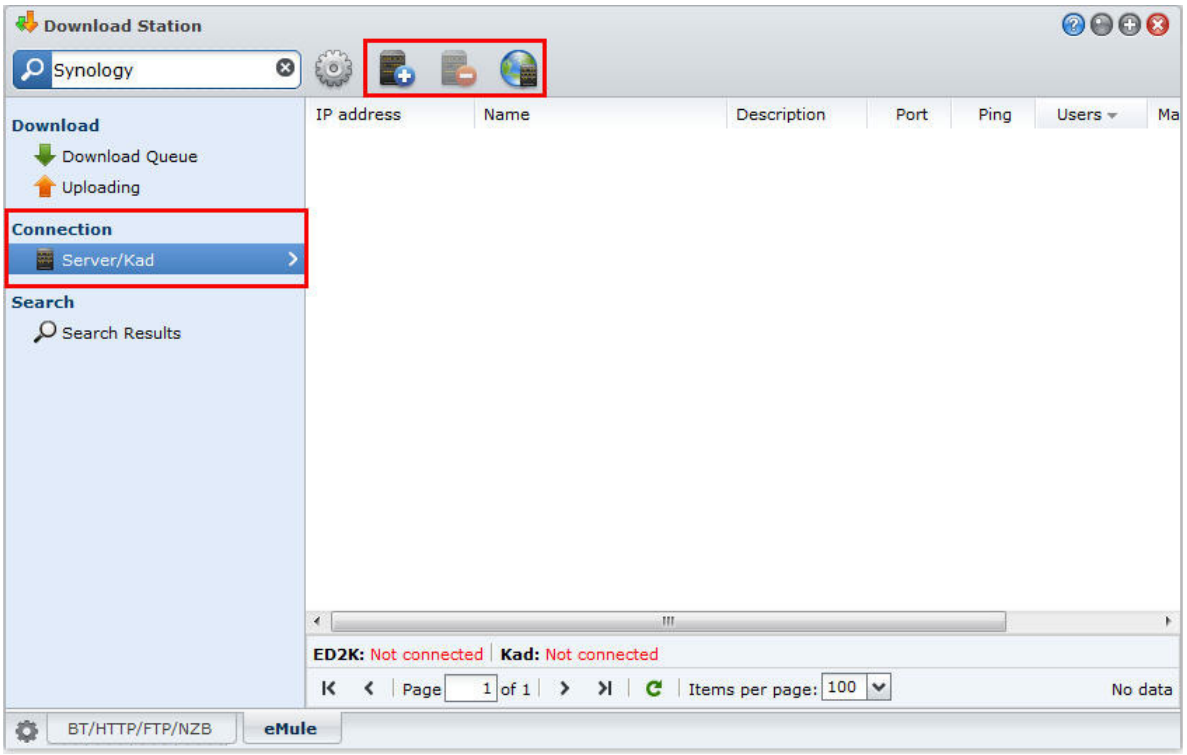
Enter the maximum upload and download rate for eMule downloads and uploads. ("0" means unlimited.)

To set the download schedule:

Like BT/HTTP/FTP/NZB's download schedule, eMule's download schedule is set up in the same manner. See "Download Schedule" on Page 116 for more information.

Connect to ED2K Server/Kad

Click **Server/Kad** on the left panel to set up Server/Kad. An ED2K server contains information about resources on the ED2K network. To search and download ED2K resources, it is necessary to connect to a server.



To add an ED2K server:

1 Click the **Add** button.

2 Choose any of the following:

- **Server IP**: Enter the IP address and port of the server.
- **ED2K Link**: Enter the ED2K link. (e.g. ed2k://|server|IP|port|/)
- **Update server.met from URL**: Enter the URL of the server.met file (e.g. http://www.synology.com/server.met).

3 Click **Add**.

To delete ED2K servers:

Select the servers from the list and click the **Delete** button.

To connect to a random ED2K server:

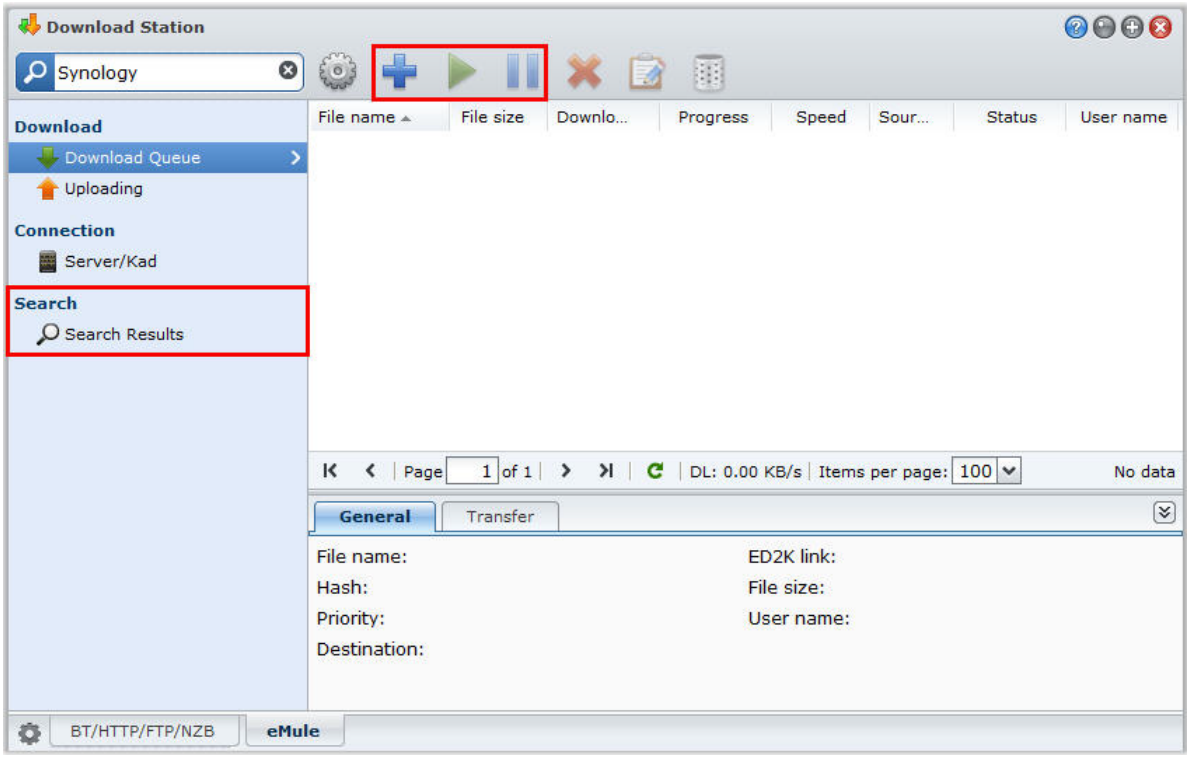
1 Select a server from the server list.

2 Click **Connect/Disconnect server**.

3 Wait for the server to be connected. When the selected server is full or has an invalid IP address, the system will randomly connect to an available server.

Create eMule Download Tasks

This section explains how to create eMule download tasks.



Create by Uploading Files

You can create download tasks by uploading a text file (.txt) containing ED2K links from your local computer to Download Station:

To create download tasks by uploading a file:

1 Click **Download Queue** on the left panel, and then click the **Create** button.

2 Choose **Open a file** and click the button to browse to the text file for upload.

3 Click **Create**.

To resume an eMule download task:

1 Select one or more tasks in the list.

2 Click the **Resume** button. Only tasks which are not completed or paused will be resume downloading.

Create by Entering URLs

You can create download tasks by entering URLs.

To create download tasks by entering URLs:

1 Click **Create**.

2 In the window that appears, choose **Enter URL**, and enter the URLs of the file you want to download. You can enter up to 50 URLs in the box.

3 Click **Create**.

Create via eMule Search

Click **Search** on the left panel to search and download the files your are looking for.

> ***Note:*** If you want to perform eMule search, make sure you are connected to an ED2K server at Server/Kad. See "Connect to ED2K Server/Kad" on Page 126 for more information.

To create download tasks via general search:

1 Enter a keyword in the search field at the top-left corner of eMule, select a file type and search method. Press "Enter" on your keyboard to start searching. Click **Start/Stop search** to stop searching.

2 The search result of available files will be listed in the main area, and might be shown in the following colors:

- **Blue:** There are sufficient sources available on the network for those files.
- **Red:** The file is already in the download queue or in the download destination.

> ***Note:*** Files already exist in the download queue will not be added to the queue again.

3 Make your selections, and click **Download selected file(s)** to create download tasks.

To create download tasks via advanced search:

1 Click on the down arrow to the right of the **Start/Stop search** button.

2 In the window that appears, do the following:

- Enter a keyword.
- Select the file type.
- Select the search method.
- Enter the minimum and maximum file size for the desired files. (optional)
- Enter the number of minimum sources. (optional)
- Enter the file extension. (optional)

3 Click **Start/Stop search** to start searching. Click the button again to stop searching.

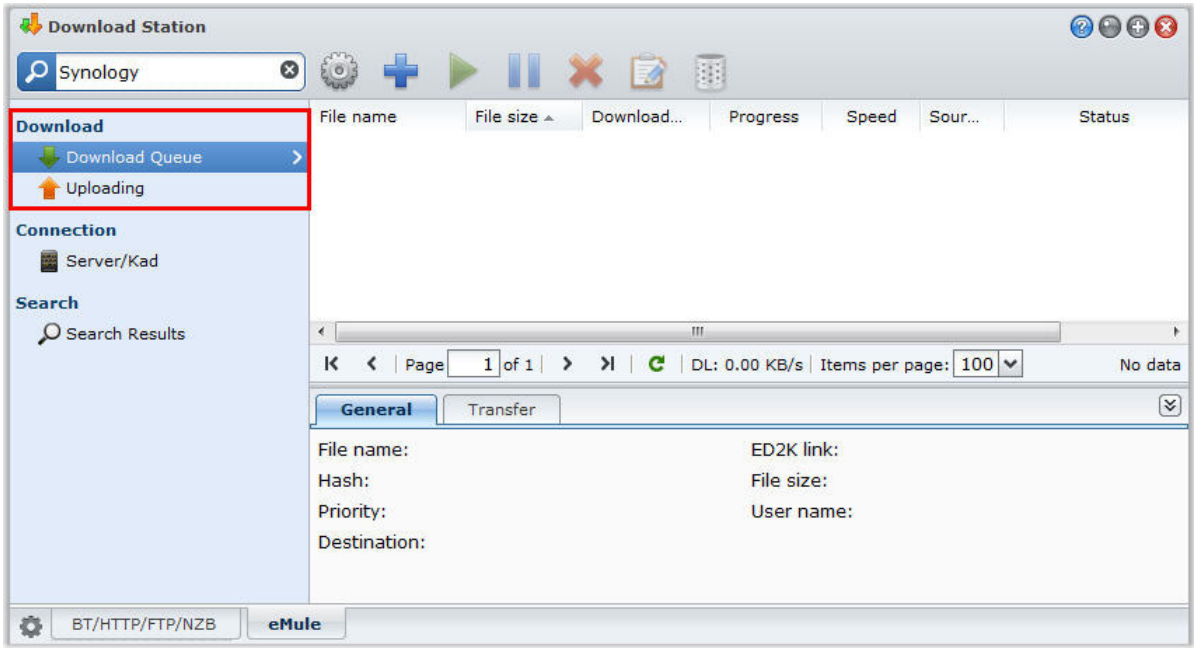
4 Make your selections, and click **Download selected file(s)** to create download tasks.

To clear search results:

Click **Clear search results** to clear the search result.

Manage eMule Download Tasks

You can check the download tasks you just created, and manage the tasks with eMule.



Manage Download Queue

Click **Download Queue** on the left panel to manage the download tasks.

To pause/resume/remove download tasks:

1 Select the download task(s) you want to pause, resume, or remove.

2 Click **Pause** or **Resume** or **Remove**.

To view detailed information about a download task:

1 Select the download task you want to view.

2 Click the tabs below the download queue to view detailed information of the task.

To edit download tasks:

1 Click **Edit** to edit the priority and change destination folder for the task.

> ***Note:*** To change the default destination folders for all download tasks, see "Location" on Page 117.

2 Click **OK**.

To clear finished download tasks:

Click **Clear**. Downloaded files will remain in the destination shared folder.

Check Upload Queue

Click **Uploading** on the left panel to check your shared files currently uploaded to other eMule clients.

> ***Note:*** To specify folders you want to share with other eMule clients, see "Location" on Page 125.

Chapter 15

Safeguard Your Environment with Surveillance Station

Surveillance Station is a web-based application that can manage IP cameras to safeguard your home or office environment. With Surveillance Station, you can watch and record live view videos, set up scheduled recording, playback recorded events via web browser, VisualStation, or mobile device for remote monitoring. Notifications can also be sent to you whenever important events occur.

This chapter explains how to manage IP cameras, watch and record live view videos, set up scheduled recording, playback recorded events, and use all the other comprehensive features provided by Surveillance Station.

Install Surveillance Station

Go to **Main Menu** > **Package Center** to install Surveillance Station.

To install Surveillance Station:

Under the **Available** tab, click **Install** to install the package.

- If there is only one volume on your DiskStation, you will be asked if you want to run the package after installation. Click **Yes** to continue.
- If there are multiple volumes on your DiskStation, you will be asked to choose from the drop-down menu to specify a destination volume to install the package.
  - **a** Select your destination volume and click **Next**.
  - **b** Tick **Run after installation** if you want to run the package once the installation is complete, and click **Apply** to install the package.

When the installation is complete, the package will be moved to the **Installed** tab and the **Main Menu** will automatically expand with the package's thumbnail on it. Moreover, the **surveillance** shared folder will be created automatically to contain your Surveillance Station data. The shared folder is read-only and can be accessed only by **admin** or a user belonging to the **administrators** group.

To launch Surveillance Station, do either of the following:

- Go to **Main Menu** and click **Surveillance Station**.
- Type Synology DiskStation's IP address or server name or domain name plus a colon and the customized port number (e.g. http://ericawang.dyndns.org:9900) in the address bar of your web browser. Press "Enter" (Windows) or "Return" (Mac) on your keyboard.

Surveillance Station will be launched in a new browser window.

Enhance Mac Compatibility

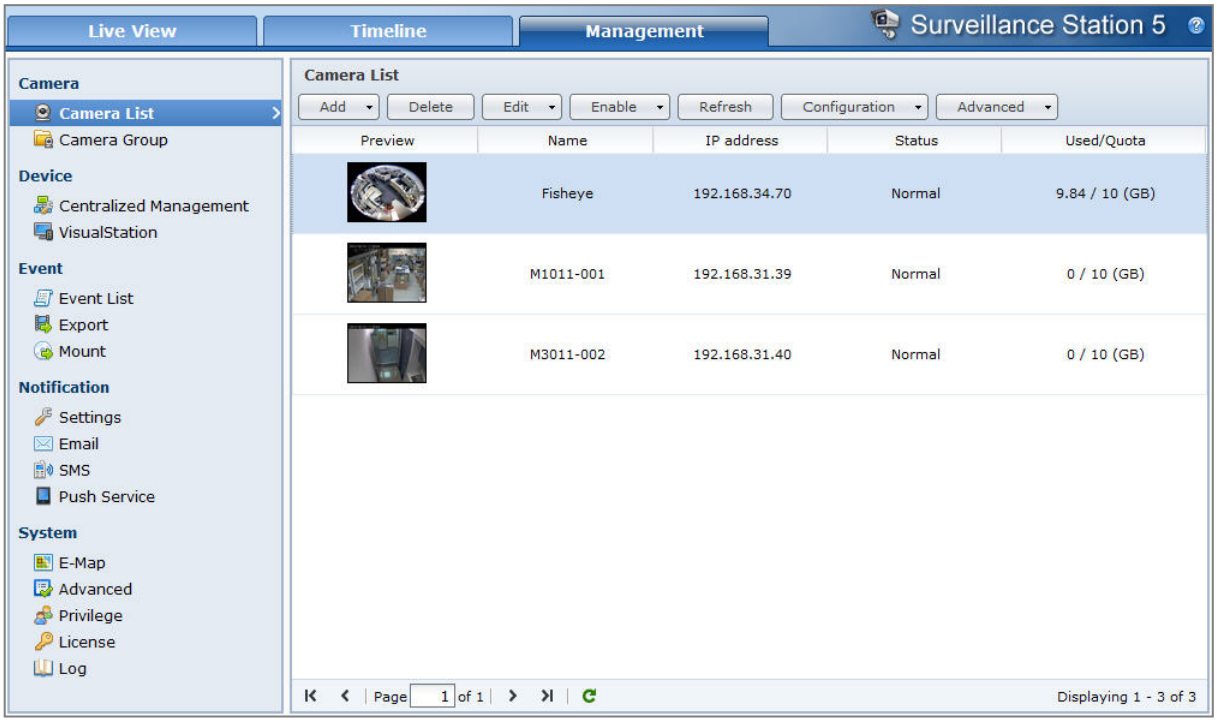
Before watching events or live views with Mac Safari, do the following to make sure your browser settings are appropriate:

1. Make sure your Safari is updated to version 5.1 or onward.
2. Go to **Apple** menu > **Software Update** and check for any possible Java updates to make sure your Java applet is up-to-date.
3. Go to **Applications** > **Utilities**, and then open **Java Preferences** to do the following:
   - On the list of Java applications, make sure the version of Java SE is 1.6.0_26 or onward.
   - Move the 32-bit version of Java SE to the top of the application list (above 64-bit).

If you are using Mac OS X 10.7 or onward, tick **Enable applet plug-in and Web Start applications**.

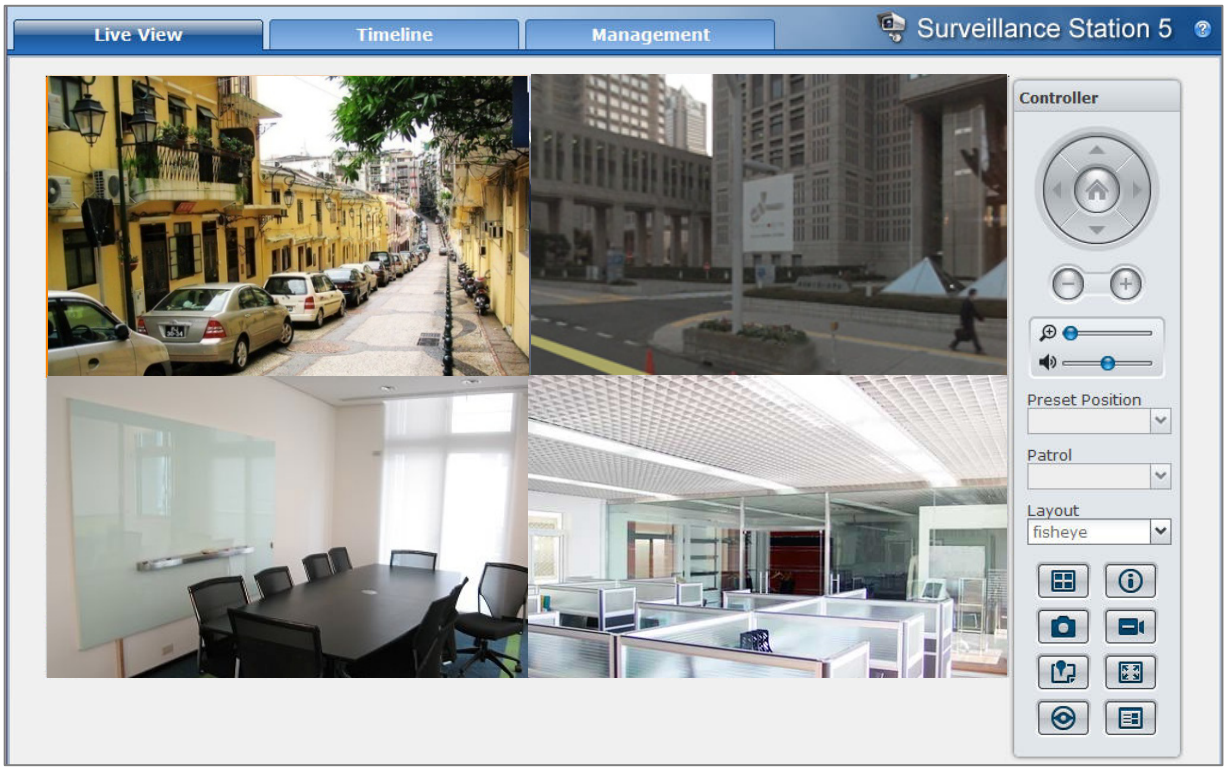
Manage IP Cameras

Go to **Camera** > **Camera List** under **Management** to add and edit cameras, set up recording schedule, and set up the advanced settings: **Motion Detection**, **Liveview Analytics**, **Guard Settings**, **Fisheye Dewarping**. To organize multiple cameras into camera groups for easier deployment, go to **System** > **Camera Group**. For detailed instructions, click the **Help** button (with a question mark) at the top-right corner.



Watch Live View

The **Live View** page displays real-time videos of all configured cameras. With Surveillance Station, you can perform various functions, from the basic PTZ (Pan/Tilt/Zoom) and snapshot features to the e-map, manual recording, video analytics, and analytics history functions.



Configure Layout

DSM **admin** (or a user belonging to the **administrators** group) and users with the **manager** privilege can configure layout setting. To customize the layout of camera live views and apply an e-map to for specific layout, click the **Configure** button. For more information, click the **Help** button (with a question mark) at the top-right corner, and then refer to the **Layout management** section.

Use PTZ Control

If your camera has PTZ (pan/tilt/zoom) support, you can select a camera and use the **Controller** panel to adjust the camera's direction. Clicking on the home button will restore the camera back to its original position. If you have selected a camera with partial PTZ support, the unsupported functions on the **Controller** panel will be grayed out.

Use Other Functions

On the **Live View** page, you can also use the following functions.

1 To digitally zoom in and out, drag the zoom bar or place the mouse over the live view of a selected camera and then scroll the mouse. You can also zoom digitally by using the scroll button on your mouse, and move by dragging the picture.

2 To adjust volume, drag the volume bar.

3 To see the corresponding preset or patrol, click the **Preset Position** or **Patrol** list.

4 Click **Show information**, and the status for each camera will be displayed on the corner of each live view window.

5 To save the current image, click **Snapshot**.

6 To start manual recording, click **Manual Recording**.

7 To see the corresponding E-Map, click **E-Map**.

8 To see the live view in full screen mode, click **Full screen**.

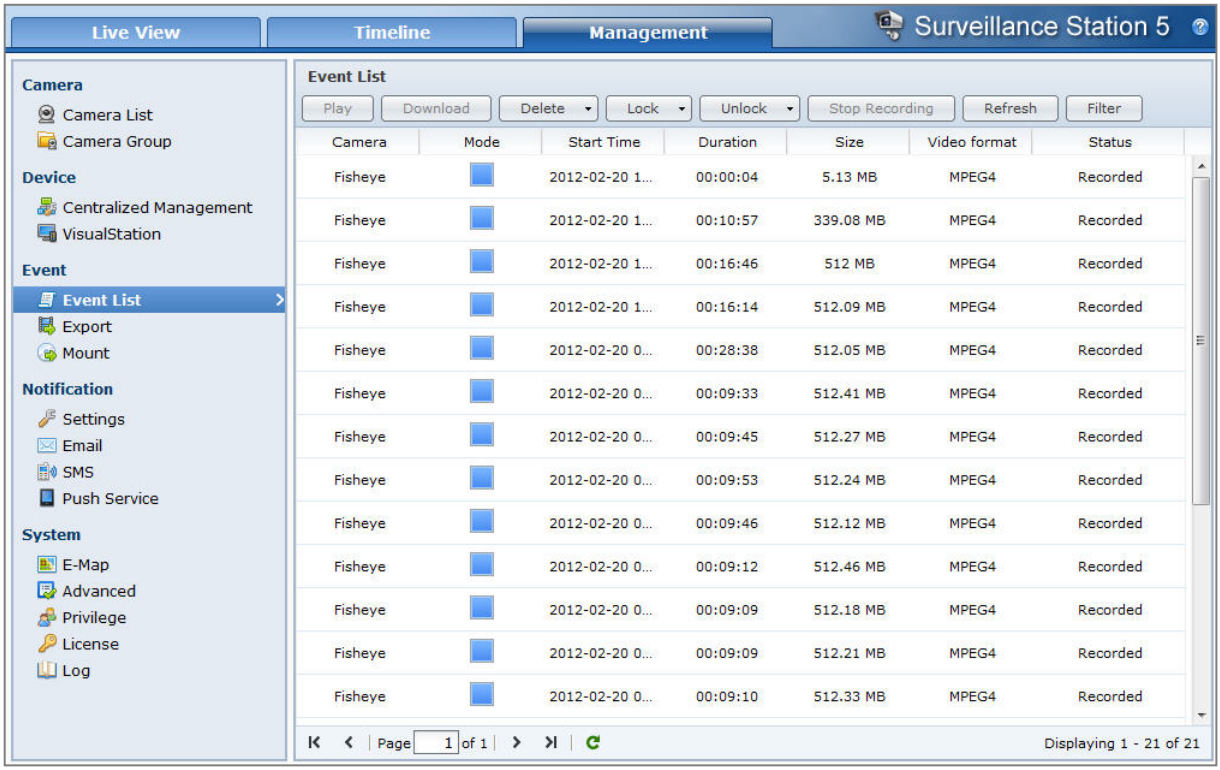
9 To analyze video images, click **Start video analytics**.

10 To playback and see the frequency of liveview analytic events, click **Analytics History**.

Note: Non-Internet Explorer browsers support limited functions only.

Play and Manage Events

Under the **Management** tab, you can go to **Event** > **Event List** to browse all recorded events, play them with the Event Player[1], and delete, lock, filter, or download the video files. For more information about managing events, click the **Help** button (with a question mark) at the top-right corner.



Event Types

All recorded events will be here. The events are displayed with the latest ones on top. The images displayed under **Mode** correspond with the type of recording the event was filmed under.

- The **gray** icon represents **Continuous Recording**
- The **blue** icon represents **Manual Recording**
- The **green** icon represents **Motion Detection Recording**
- The **orange** icon represents **Alarm Recording**
- The **green**/**orange** icon represents **Motion Detection and Alarm Recording**
- The icon represents the recorded event is being saved right now

Note: Your IP camera must support alarm recording to be able to use **Alarm Recording**. Alarm recording often relates to the IP camera's digital input and output pin, or DIDO. Refer to its datasheet for pin configuration detail. Alarm recording will begin when the IP camera detects an input pin is triggered.

Play Events with Timeline

Click the **Timeline** tab to see the timeline page, which offers the Multiple-Event Playback function, which allows you to simultaneously watch events recorded on one day or at the same time by different cameras. All event videos are lined up in the timeline. You can easily find the event you are looking by clicking a specific time on this day or during the hour, and play it with the event player on this page. For more information, click the **Help** button at the top-right corner.

Search for Specific Situations with Smart Search

Click the search icon at the bottom-right corner of the timeline page to enter the **Smart Search** mode. With Smart Search, you can search events for specific situations such as general movement or missing/foreign objects on

the screen. If the camera lens was occluded or lost its focus by people trying to avoid surveillance, Smart Search can also help you find out when the situations happened. For more information, click the **Help** button at the top-right corner.

Export Events

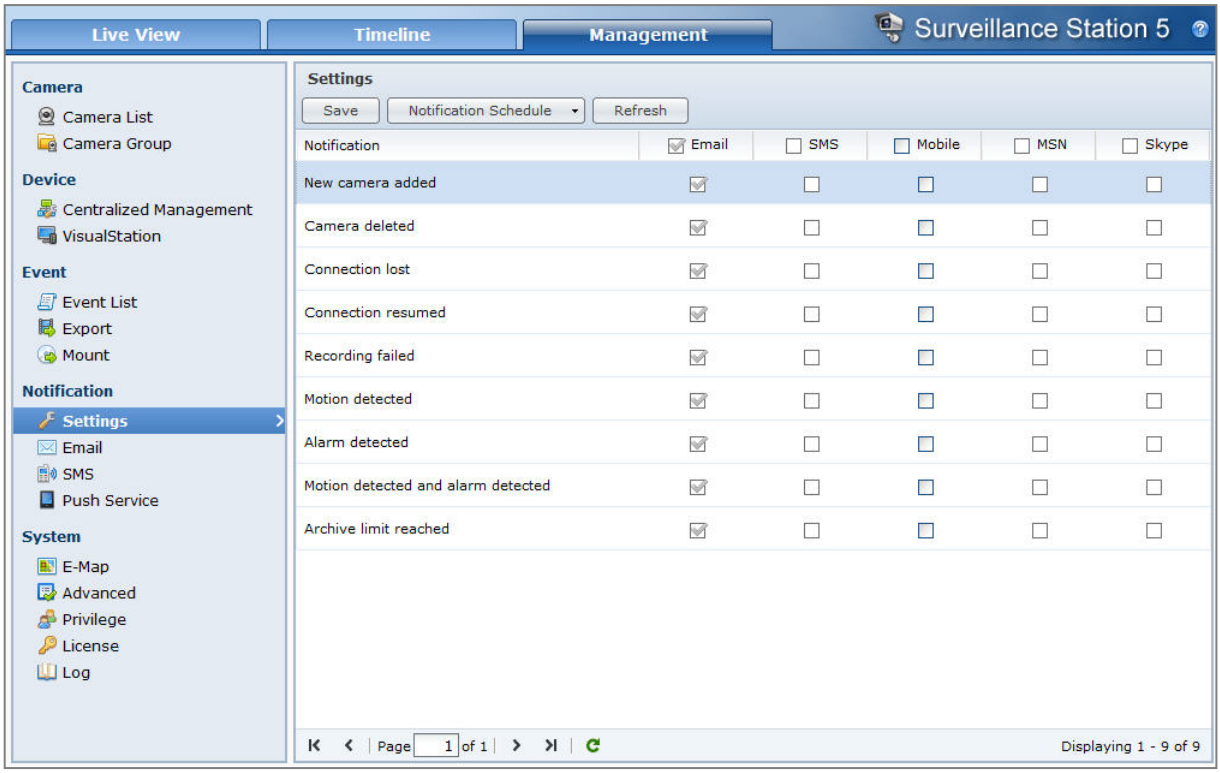
Go to **Event** > **Export** under **Management** to export the events. You can export events from Surveillance Station to any shared folder or to an external storage device via USB or eSATA interface. For more information, click the **Help** button (with a question mark) at the top-right corner.

Mount Events

Go to **Event** > **Mount** under **Management** to mount exported events. You can mount exported archives onto Surveillance Station. The events in the mounted archive can be played in **Event Management** and **Timeline** page. For more information, click the Help button (with a question mark) at the top-right corner.

Manage Notification Settings

Go to **Notifications** > **Email**, **SMS**, or **Push Service** to have Surveillance Station send you notification messages to via email, SMS, mobile devices or instant messaging programs whenever important events occur. You can decide which types of events to be notified at **Notification** > **Settings** under **Management**.



Settings

Surveillance Station can send you a system notification via e-mail, SMS message, mobile device, MSN (Windows Live Messenger), and Skype, whenever important events occur.

Note: Make sure you have set up email (at **Notification** > **Email**), SMS (at **Notification** > **SMS**), mobile device, MSN, or Skype (at **Notification** > **Push Service**) settings before specifying notification types and schedule on this page.

To select event notification types:

1 Tick the checkboxes to select the types of events that will trigger Surveillance Station to send notification messages.

2 Click **Save**.

To set the notification schedule for a notification type:

1 Choose a notification type, and go to **Notification Schedule** > **Settings**.

2 Do either of the following to set the notification schedule:

- For **New camera added** and **Camera deleted**, click **Allow Notification** or **Delete**, and then click or drag on the grid to limit event notification to certain periods of a week.
- For the remaining notification types, choose a camera from the Camera drop-down menu to specify which camera will trigger event notification, click **Allow Notification** or **Delete**, and then click or drag on the grid to limit the camera's event notification to certain periods of a week.

> ***Note:*** If you choose **New camera default settings** from the **Camera** drop-down menu, the notification schedule you specified will be applied to all cameras added to Surveillance Station in the future.

3 If you also want to apply the notification schedule to other event notification types, tick **Also apply this schedule to** and do either of the following:

- For **New camera added** and **Camera deleted**, choose a notification type from the **Notification type** drop-down menu.
- For the remaining notification types, choose a notification type from the **Notification type** drop-down menu, and choose a camera from the **Camera** drop-down menu to apply the notification schedule to that camera.

> ***Note:*** If you choose another notification type (other than **New cameras added** or **Camera deleted**), and then choose **All** from the **Camera** drop-down menu, the schedule will be applied to the specified event for all cameras.

4 Click **OK**.

To batch edit notification schedule for notification types:

1 Go to **Notification Schedule** > **Batch Edit**. The welcome page of the Batch Notification Scheduling Wizard will appear.

2 Follow the onscreen instructions to complete the setup.

Email

You can set up email notification in order for Surveillance Station to send you a system notification by email.

To enable e-mail notification:

Tick **Enable e-mail notifications**, and do either of the following to complete the settings:

- **Apply the notification settings in the Management UI**: Surveillance Station will use the identical email account information to which maintained by the DSM Management UI to sent the event notification mails. You can set up this email information at **Main Menu** > **Control Panel** > **Notification** of the DSM Management UI.
- **Apply the following email information**: You are required to set up a particular email information for Surveillance Station. The notification mails will be sent based on this setting when system events occur.
  - **a** **SMTP server**: Enter the SMTP server name or IP address.
  - **b** **SMTP port**: By default, the SMTP port number is 25. Modify the number if you have specified a different SMTP port while setting up port forwarding rules.
    - If your SMTP server requires SSL connection, tick **This server requires a secure connection (SSL)**.
    - If your SMTP server requires SMTP authentication, tick **Authentication required**, enter your username and password for the email server.
  - **c** Enter the email address that will receive the notification mails in the **Primary email** or the **Secondary email** field.
  - **d** Click **Send a test mail** to see if your email settings are set up properly.
  - **e** Click **Save** to save the configuration.

SMS

You can set up SMS notification to receive system notifications from Surveillance Station via SMS messages.

To set up SMS notification:

1 Choose either of the following options:

- **Apply the SMS notification settings in Management UI**: Surveillance Station will send SMS notifications to the SMS account specified at the DSM Management UI (**Main Menu** > **Control Panel** > **Notification**).
- **Apply the following SMS settings**: Specify the following information and Surveillance Station will send SMS notifications to the SMS account specified here:

2 If you choose **Apply the following SMS settings**, you need to complete the following steps:

a Select a SMS provider from the **SMS service provider** drop down menu. The default service provider is "Clickatell."

b Click **Add** to create a new SMS provider configuration or click **Delete** to delete the selected SMS provider configuration. See below for detailed instructions.

c In the fields under **Authentication**, enter the username and password of your SMS service account.

> ***Note:***
> - The username is case sensitive and must be between 1 and 32 Unicode characters.
> - The password is case sensitive and must be between 0 and 24 displayable characters, including letters, numbers, signs, and space.

d Enter your **Primary phone number**. If you enter a **Secondary phone number**, SMS notification messages will be sent to both numbers.

e If you do not wish to receive too many messages, tick **Minimum message interval (minutes)** and limit the number of notification messages to one message per the time interval you specified.

> ***Note:*** The value must be between 1 and 10000.

f Click **Send a test SMS message** to send a test SMS message to the phone number you specified. If no message is received, it means the configuration is incorrect.

3 Click **Save**.

To add an SMS provider:

1 Click **Add**.

2 In the **Provider name** field, enter the name of your SMS service provider.

> ***Note:*** The provider name is case sensitive and must be between 1 and 32 Unicode characters.

3 In the **SMS URL** field, enter a SMS URL with the message content set to "Hello world." You can obtain the SMS URL from your SMS service provider.

> ***Note:*** The SMS URL is case sensitive and must be between 1 and 500 Unicode characters.

4 Click **Next**.

5 On the **URL parameter definition** page, the system will break down the SMS URL into several parameters. Define each parameter by selecting the corresponding category. Each parameter category can be used only once except **Other**.

> ***Note:*** The number of parameters must be between 4 and 10.

Push Service

You can enable push service to send notification messages to your mobile devices and instant messaging programs (Windows Live Messenger and Skype) via Synology's push service server when status changes or errors occur to cameras.

To enable mobile device notifications:

1 Tick **Enable mobile device notifications**, and then click **Save**.

2 Install and launch **DS cam** on your mobile device, and then log in to your Surveillance Station to pair your mobile with Surveillance Station. For more information, refer to its Help file.

> ***Note:*** Push service is currently supported by DS cam for iPhone/iPad only.

3 Click **Send a test message** and then click **OK** to send a test notification. Now you can launch **DS cam** on your mobile device to check whether the test message is received.

To manage paired mobile devices:

1 Click **Manage paired devices** to see the list of all paired mobile devices.

2 If you want to unpair any of the devices, select them and click **Unpair**. (Press and hold Shift or Ctrl while making multiple selections.) No notification will be sent to them unless you pair them up again.

To enable instant messaging notifications:

1 Tick **Enable Windows Live Messenger notifications** and/or **Enable Skype notifications**, and then click **Save**.

2 Enter one or more instant messaging accounts in the **Windows Live Messenger account** and/or the **Skype account** field.

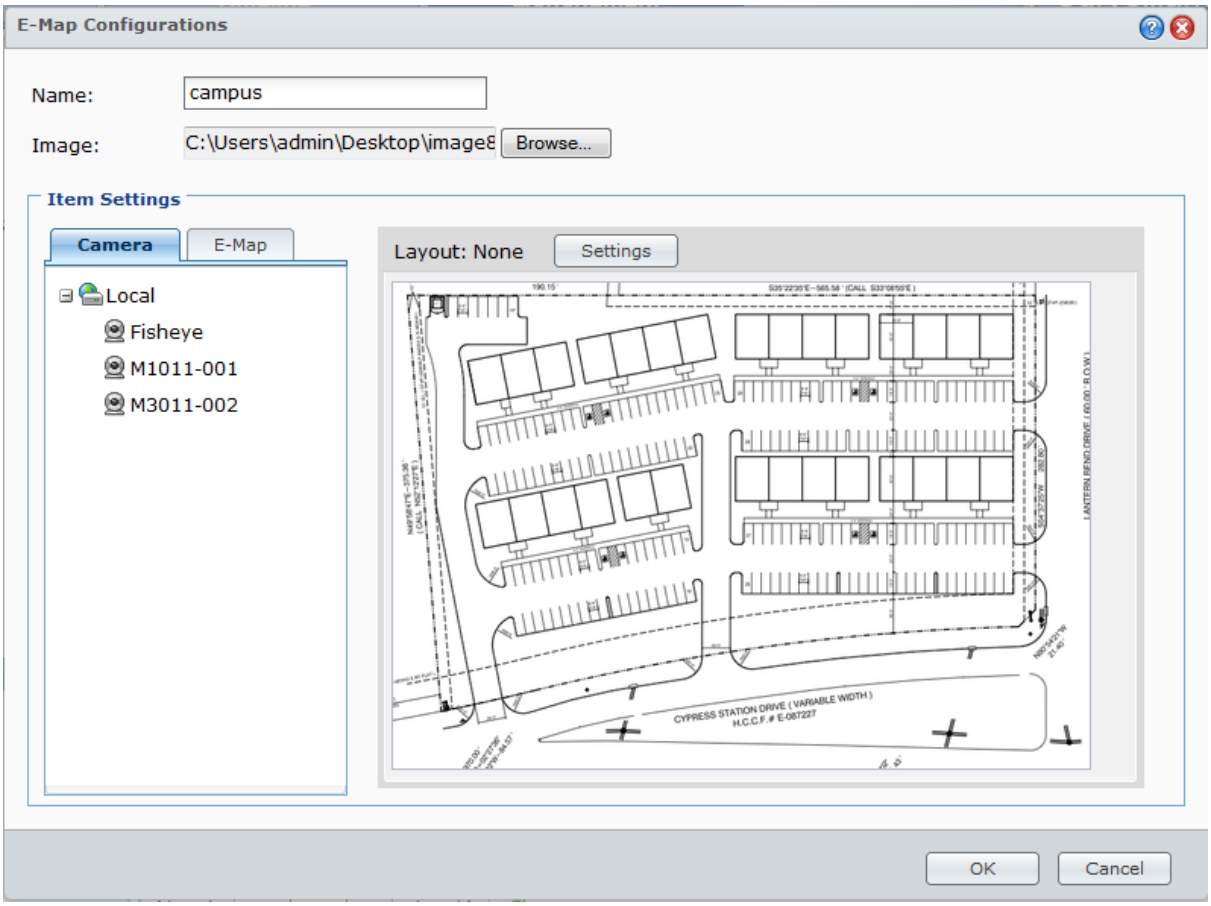
> ***Note:*** For each instant messaging program, the maximum number of accounts is 2. You must separate them with ';'.

3 Log in to your instant messaging program to accept friend invitation from Synology's push service.

4 Click **Send a test message** and then click **OK** to send a test notification. Now you can launch your instant messaging program to check whether the test message is received.

Use E-Map

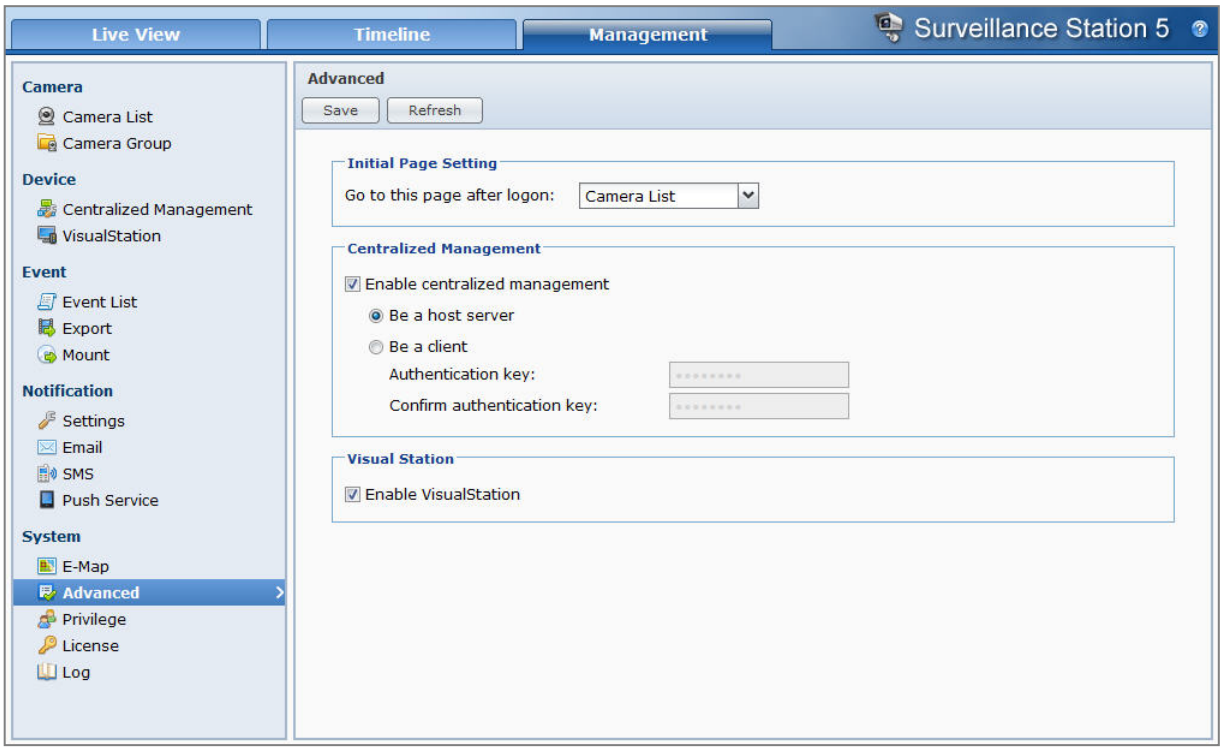
You can add, edit, and delete e-maps at **System** > **E-Map** under **Management**. For more information, click the **Help** button (with a question mark) at the top-right corner.



After the e-map is created, you can go to **Live View** and click **Configure** to assign the e-map to a live view layout. When the setup is complete, you can click the **E-Map** button on the **Live View** page to open the map and quickly pinpoint the location of a camera.

Manage Advanced Settings

Go to **System** > **Advanced** under **Management** to manage the advanced settings for Surveillance Station.



Initial Page Setting

You can choose from the drop-down menu to set the initial page after logging in to Surveillance Station.

Centralized Management

Centralized management allows you to set your DiskStation as a host server, and then add multiple DiskStations as clients to form a larger Surveillance network. The host server can serve as the central portal to monitor cameras managed by all clients.

To set your DiskStation as a host server or client:

1 Tick **Enable centralized management**.

2 Do either of the following:

- Choose **Be a host server**.
- Choose **Be a client**, and then set the authentication key. The host server will be required to enter the correct key to log in and watch live views and events on your DiskStation.

3 Click **Save**.

To manage client DiskStations (if your DiskStation is set as a host server):

Go to **Device** > **Centralized Management** under **Management**. For more information, click the **Help** button (with a question mark) at the top-right corner.

VisualStation

VisualStation is a live view and event playback device designed to expand the flexibility of Surveillance Station. When a VisualStation within LAN is managed by your DiskStation, you can connect a TV set or LCD monitor to

the VGA port of VisualStation, and then watch live views and events of IP cameras managed by your DiskStation on the TV/LCD screen without using a computer.

To enable VisualStation support:

Tick **Enable VisualStation** and click **Save**.

> ***Note:*** This option is only editable by **admin** (or a user belonging to the **administrators** group).

To manage available VisualStations within LAN:

Go to **Device** > **VisualStation** under **Management**. For detailed instructions, click the **Help** button (with a question mark) at the top-right corner.

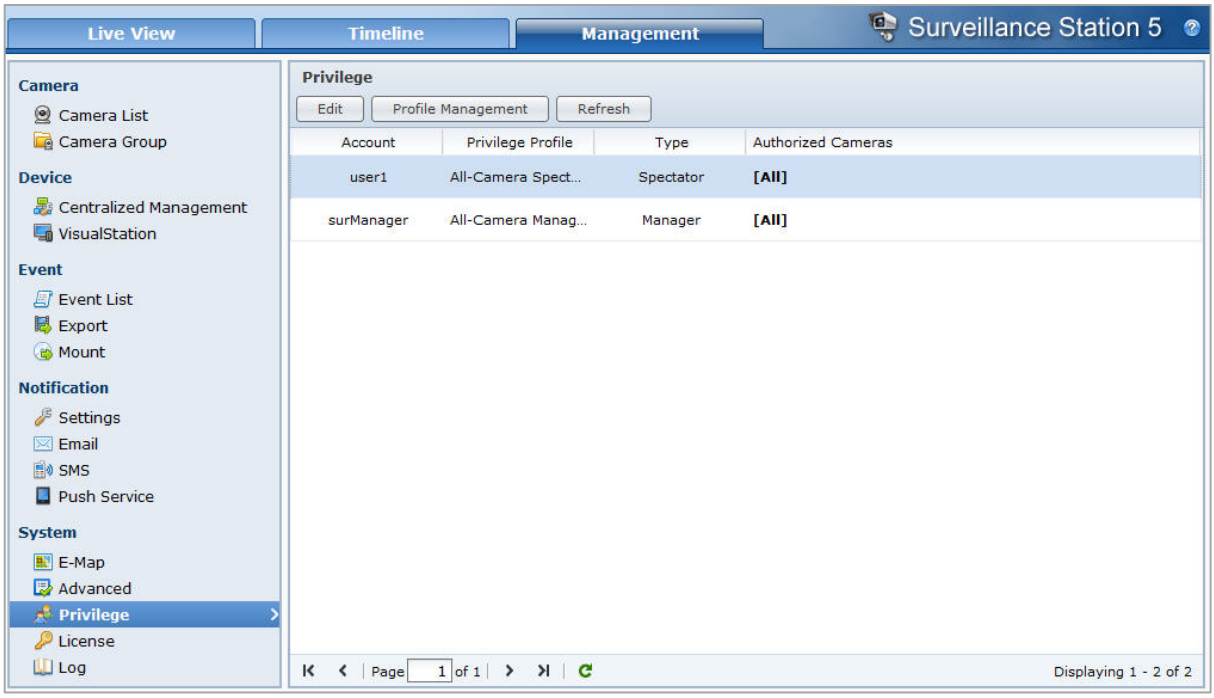
> ***Note:*** A VisualStation can only be managed by a DiskStation within the same LAN.

Video Output Module

When DirectX is set as the video output module, live view or events might not display correctly with some computers due to video card performance. This problem may be fixed by using OpenGL instead.

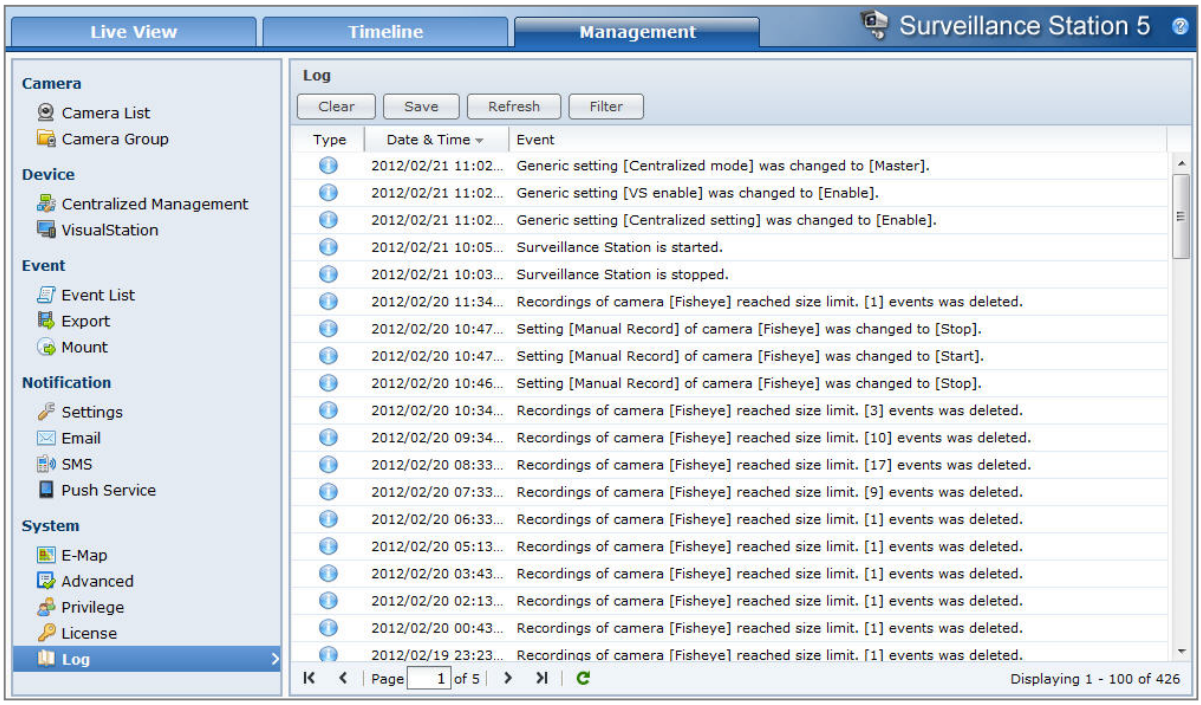
Assign Privilege

Go to **System** > **Privilege** under **Management** to manage and assign access privileges to IP cameras for DSM users. For detailed instructions, click the **Help** button (with a question mark) at the top-right corner.



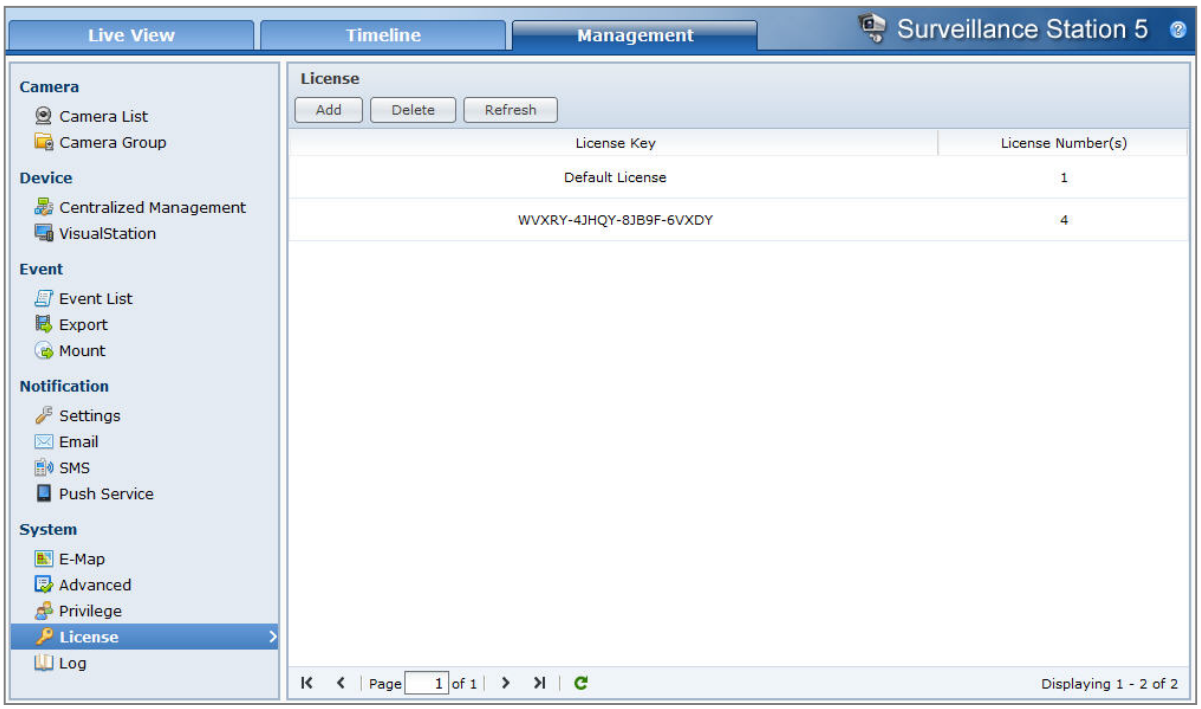
View Log

Go to **System** > **Log** under **Management** to view and manage log records of critical events such as camera disconnection or changes on the camera settings. For more information, click the **Help** button (with a question mark) at the top-right corner.


Live View
Timeline
Management
Surveillance Station 5
Camera
Camera List
Camera Group
Device
Centralized Management
VisualStation
Event
Event List
Export
Mount
Notification
Settings
Email
SMS
Push Service
System
E-Map
Advanced
Privilege
License
Log
Clear
Save
Refresh
Filter
Type
Date & Time
Event
2012/02/21 11:02... Generic setting [Centralized mode] was changed to [Master].
2012/02/21 11:02... Generic setting [VS enable] was changed to [Enable].
2012/02/21 11:02... Generic setting [Centralized setting] was changed to [Enable].
2012/02/21 10:05... Surveillance Station is started.
2012/02/21 10:03... Surveillance Station is stopped.
2012/02/20 11:34... Recordings of camera [Fisheye] reached size limit. [1] events was deleted.
2012/02/20 10:47... Setting [Manual Record] of camera [Fisheye] was changed to [Stop].
2012/02/20 10:47... Setting [Manual Record] of camera [Fisheye] was changed to [Start].
2012/02/20 10:46... Setting [Manual Record] of camera [Fisheye] was changed to [Stop].
2012/02/20 10:34... Recordings of camera [Fisheye] reached size limit. [3] events was deleted.
2012/02/20 09:34... Recordings of camera [Fisheye] reached size limit. [10] events was deleted.
2012/02/20 08:33... Recordings of camera [Fisheye] reached size limit. [17] events was deleted.
2012/02/20 07:33... Recordings of camera [Fisheye] reached size limit. [9] events was deleted.
2012/02/20 06:33... Recordings of camera [Fisheye] reached size limit. [1] events was deleted.
2012/02/20 05:13... Recordings of camera [Fisheye] reached size limit. [1] events was deleted.
2012/02/20 03:43... Recordings of camera [Fisheye] reached size limit. [1] events was deleted.
2012/02/20 02:13... Recordings of camera [Fisheye] reached size limit. [1] events was deleted.
2012/02/20 00:43... Recordings of camera [Fisheye] reached size limit. [1] events was deleted.
2012/02/19 23:23... Recordings of camera [Fisheye] reached size limit. [1] events was deleted.
Page 1 of 5
Displaying 1 - 100 of 426

About Camera License

Go to **System** > **License** under **Management** to manage camera license. With **Default License**, your DiskStation can manage one camera within LAN. If your DiskStation supports multiple cameras, you can purchase **Synology Camera License Packs** and then add the license key here to manage additional cameras. For more information, click the **Help** button (with a question mark) at the top-right corner.



Chapter 16

Manage Media Server and iTunes Service

Synology DiskStation can become a multimedia server on the local area network, allowing computers (using Windows Media Player or iTunes) and DLNA/UPnP home devices (such as stereo system or TV set) to play its multimedia contents.

This chapter explains how to stream multimedia contents from Synology DiskStation to your computer or other DLNA/UPnP home devices.

Install DLNA Media Server

Go to **Main Menu** > **Package Center** to install Media Server.

To install Media Server:

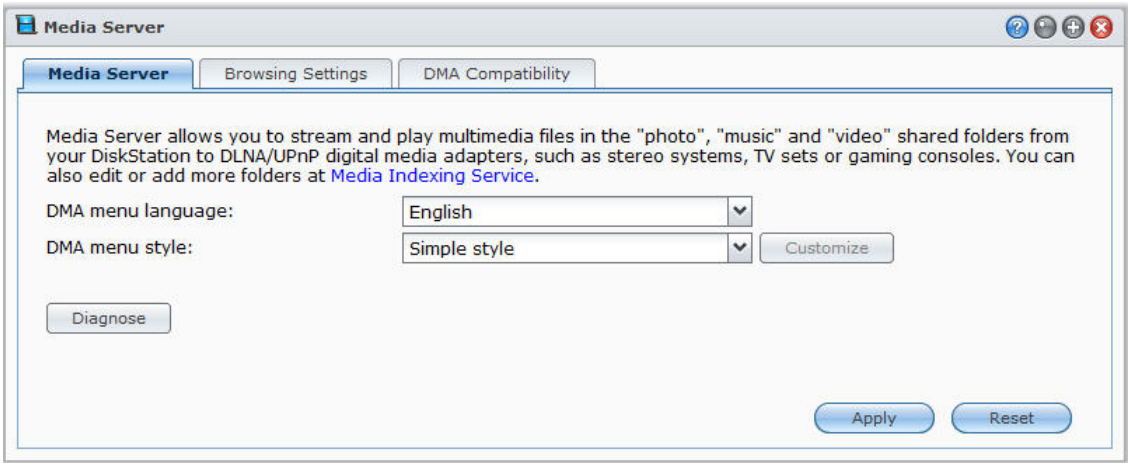
Under the **Available** tab, click **Install** to install the package.

- If there is only one volume on your DiskStation, you will be asked if you want to run the package after installation. Click **Yes** to continue.
- If there are multiple volumes on your DiskStation, you will be asked to choose from the drop-down menu to specify a destination volume to install the package.
  - **a** Select your destination volume and click **Next**.
  - **b** Tick **Run after installation** if you want to run the package once the installation is complete, and click **Apply** to install the package.

When the installation is complete, the package will be moved to the **Installed** tab and the **Main Menu** will automatically expand with the package's thumbnail on it.

Manage DLNA Media Server

Go to **Main Menu** > **Media Server** to browse and play the multimedia contents on Synology DiskStation via DLNA/UPnP home devices, also known as **Digital Media Adapter (DMA)**. With Media Server, you can easily connect those devices such as TV sets and stereo systems to your home network, and stream multimedia files stored on DiskStation to the devices to enjoy music, photos, and videos. More indexed folders can be added for sharing at Media Indexing Service. See "Manage Indexed Folder" on Page 144 for more information.


Media Server
Media Server
Browsing Settings
DMA Compatibility
Media Server allows you to stream and play multimedia files in the "photo", "music" and "video" shared folders from your DiskStation to DLNA/UPnP digital media adapters, such as stereo systems, TV sets or gaming consoles. You can also edit or add more folders at Media Indexing Service.
DMA menu language:
English
DMA menu style:
Simple style
Customize
Diagnose
Apply
Reset

Note: You can play the following multimedia file formats on Synology DiskStation with DLNA/UPnP enabled DMA[1]:

- **Audio:** AAC, FLAC, M4A, MP3, Ogg Vorbis, PCM, WAV, WMA, WMA VBR, WMA PRO, WMA Lossless
- **Image:** BMP, JPG (jpe, jpeg), GIF, ICO, PNG, PSD, TIF (tiff), UFO, RAW (arw, srf, sr2, dcr, k25, kdc, cr2, crw, nef, mrw, ptx, pef, raf, 3fr, erf, mef, mos, orf, rw2, dng, x3f)
- **Video:** 3GP, 3G2, ASF, AVI, DAT, DivX, DVR-MS, ISO, M2T, M2TS, M4V, MKV, MP4, MPEG1, MPEG2, MPEG4, MTS, MOV, QT, SWF, TP, TRP, TS, VOB, WMV, XviD, RV30, RV40, AC3, AMR, WMA3, RMVB
- **Playlist:** M3U, WPL

Determine the DMA Menu Language and Style

You can decide how to organize your multimedia files on the DMA menu by selecting a predefined menu style or customizing your own. The system can save up to three different sets of customized menu styles.

To customize a DMA menu language:

1 Click the **DMA menu language** drop-down menu, and choose a language from the list.

2 Click **Apply**.

Note: For users to correctly browse the multimedia files on the server, the codepage and menu language you set should be identical with those of the DMA. For more information about setting the codepage, see "Language" on Page 22.

To customize a DMA menu style:

1 Choose one of the three customized styles, and then click **Customize**.

2 Click one of the following tabs: **Music**, **Photo**, or **Video**.

3 Do any of the following:

- **If you want to create a new menu style,** click **Create**. If you have selected **Music**, there will be a list of templates.
- **If you want to edit an existing style,** click **Edit**.

Record Diagnostic Log

The log can help determine the cause of the problem when you contact Synology Support for assistance.

To manage DMA communication log:

1 Click **Diagnose** and tick **Enable DMA communication log for diagnostic purpose** to start recording the log.

2 You can download or clear the recorded log by clicking **Download** or **Clear**.

3 Click **OK**.

Manage Browsing Settings

In the **Browsing Settings** section, you can manage the browsing settings for DMA.

To quickly browse images:

Tick **Transmit low resolution images instead of the original images**.

To change how your music files will be displayed:

Select a **Music display format** from the drop-down menu.

To set album cover (for music files without an embedded image) or video thumbnails:

1 Tick **Set images with the below filenames as music/video cover**.

2 Enter **Filenames** such as **Cover.jpg**, and the image with the same filename under the same folder as the music files will be displayed as album covers or video thumbnails. The filenames are case sensitive, and the filename listed closest to the front will be used when multiple images are available.

---

[1] The actual playback capabilities may vary depending on the DLNA/UPnP client.

To show video's title using embedded information instead of file name:

Tick **Show video's title using embedded information**.

To browse and play the radio stations listed on Audio Station:

Tick **Enable Internet Radio**.

Enhance DMA Compatibility

In the **DMA Compatibility** section, you can enhance DMA compatibility to make sure the multimedia contents on your DiskStation are played smoothly on your DMA devices.

To enable transcoder settings:

Tick the following checkboxes to enable transcoders if your DMA does not support the following audio formats: **FLAC**, **APE**, **AAC**, **OGG**, and **AIFF**.

To help DMA identify multimedia file formats:

Tick **Enable customized MIME types** and enter the customized MIME types.

More Information

MIME types, also known as **Internet media types**, can improve the compatibility of multimedia files with DMA by specifying the type and sub-type of media files. You can customize the MIME types to help your DMA device identify the correct file formats.

To manage the list of DMA devices:

Click **Device list** to see the list of DMA devices found by DiskStation. For more information about managing the list of DMA devices, click the **Help** button (with a question mark) at the top-right corner.

Manage Indexed Folder

By default, media files within the **photo**, **video**, and **music** shared folders are indexed by Media Indexing Service. If you want DMA devices and DSM's photo, video, or music applications to access more files on your DiskStation, you can add more indexed folders at **Main Menu** > **Control Panel** > **Media Indexing Service** > **Indexed Folder**.

To add an indexed folder:

1. Click **Create**.
2. In the window that appears, give the folder a name that will be seen by DMA devices and DSM applications in the **Name** field.
3. Click **Select**, browse to a folder you want to index, and then click **OK**.
4. In the **File Type** section, tick the checkboxes to specify which types of media files will be indexed. DMA devices and DSM applications can only browse and play media files that match the specified file types.
5. Click **OK** and then click **Save**.

Note:

- Remote folders mounted using File Station cannot be added as indexed folders.
- You can add up to 100 indexed folders on your DiskStation

To edit an indexed folder:

1. Select the folder on the folder list, and then click **Edit**.
2. Make changes to the settings. (See "To add an indexed folder" for detailed information.)
3. Click **OK** and then click **Save**.

To remove folder(s) from the list of indexed folders:

1. Select the folder(s) on the folder list, and then click **Delete**. (Press and hold Shift or Ctrl while making multiple selections.)
2. Click **Yes** and then click **Save**.

Note:

- Deleting folders doesn't actually remove them from your DiskStation. It only prevents DMA devices and DSM applications from browsing and playing their contents.
- You are not allowed to delete the **photo**, **video**, and **music** shared folders from the list of indexed folders.

Play Multimedia Contents with DMA Devices

Synology DiskStation can pair up perfectly with Sony PS3, Xbox 360, and many other DMA devices. You can use those devices to browse and stream multimedia contents from your DiskStation to your stereo system and TV set.[1]

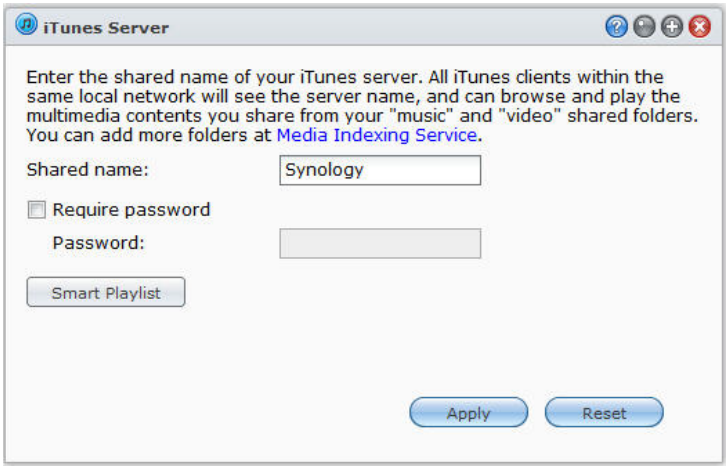
Note: For information about browsing media server's contents with DMA devices, see the documentation that came with your device.

Install iTunes Server

Go to **Main Menu** > **Package Center** to install iTunes Server.

Manage iTunes Server

Go to **Main Menu** > **iTunes Server** to use iTunes service. After it is enabled, all iTunes clients on the same local area network can browse and play songs or videos in the **music** and **video** shared folders on the server. The server will be listed below **Shared** in the iTunes window after the service is enabled.


iTunes Server
Enter the shared name of your iTunes server. All iTunes clients within the same local network will see the server name, and can browse and play the multimedia contents you share from your "music" and "video" shared folders. You can add more folders at Media Indexing Service.
Shared name:
Synology
Require password
Password:
Smart Playlist
Apply
Reset

Note: For privacy reasons, iTunes clients are not allowed to view videos in the **photo** shared folder.

The following formats will be supported by iTunes service:

- **Audio:** MP3, M4A, M4P
- **Video:** MOV, MP4, M4V
- **Playlist:** WPL, M3U

Enable iTunes Server

1 Enter your **Shared name**.

2 Tick **Require password** and enter a password if you want iTunes users to enter a password before accessing your shared folders.

3 Click **Apply**.

---

[1] For recommended peripheral models, including hard drive, USB printer, DMA, and UPS, please visit **www.synology.com**.

Note:

- The shared name can contain a maximum of 63 characters.
- The password for the shared folder can contain a maximum of 255 characters.

Use Smart Playlist

Click **Smart Playlist** to open the **Smart Playlist** window, where you can create and edit smart playlists on your Synology DiskStation.

A smart playlist can automatically include certain types of songs that match specific rules. iTunes clients will be able to play the smart playlist you created.

To create a smart playlist:

1 Click **Smart Playlist**.

2 Click the **Create** button, and enter a name for the playlist.

3 Click **Add Rule** to set rules.

4 After finishing, click **OK**.

Note: The playlist name can contain a maximum of 255 bytes.

To edit a smart playlist:

1 Double-click on the item you want to edit from the smart playlist table, or select the item and click **Edit**.

2 Change rules according to your requirement. To add or delete rules, click the **Add Rule** or **Delete Rule** button.

3 Click **OK**.

To delete a smart playlist:

1 Select the smart playlist you want to delete.

2 Click **Delete** and then click **Yes**.

Note: You can also create and edit smart playlists with Audio Station. See "Work with Playlist" on Page 110 for more information.

Re-index Media Files

Click **Re-index** at **Main Menu** > **Control Panel** > **Media Indexing Service** to reconstruct the index structure of the audio files if you find missing files while browsing through Synology DiskStation with iTunes. The process will be executed in the background.

For more information about the index function provided by Media Indexing Service, click the **Help** button (with a question mark) at the top-right corner at **Main Menu** > **Control Panel** > **Media Indexing Service**, or see "Index Multimedia Files for Applications" on Page 157.

Chapter 17

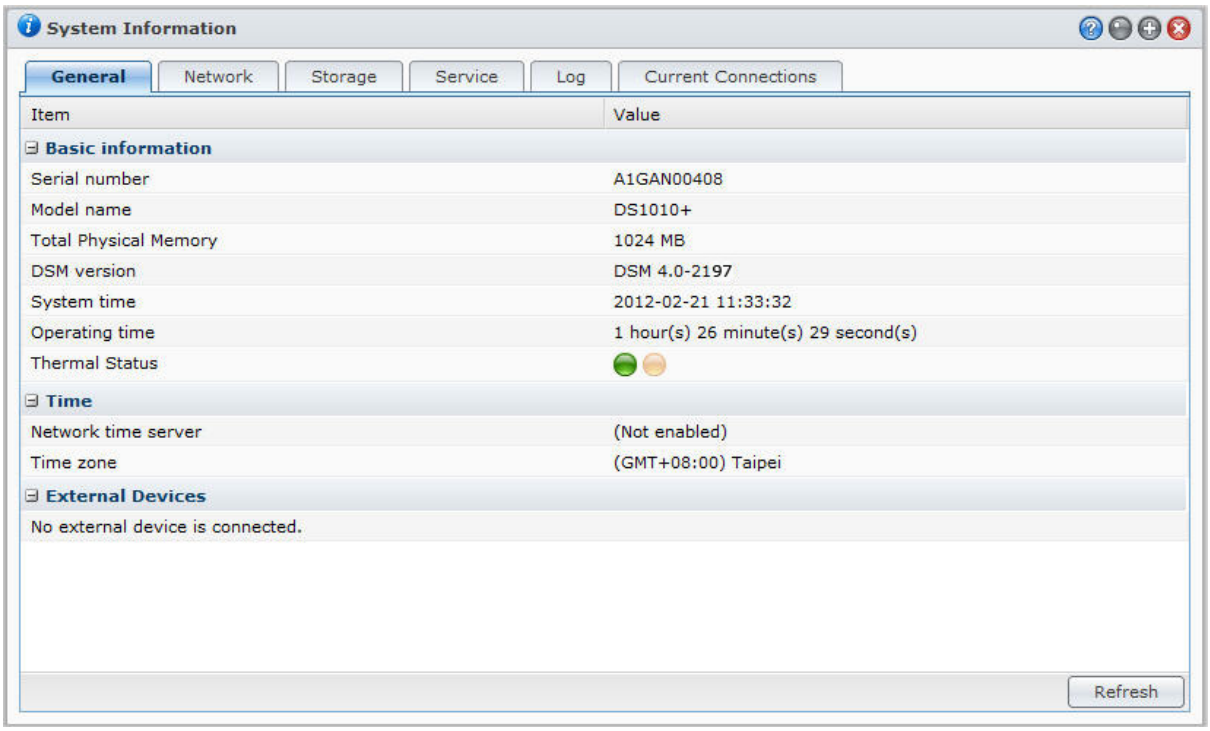
Perform Advanced Management Tasks

Synology DiskStation Manager comes with a variety of management functions, allowing you to check system information, monitor system resources, manage notification services, restore or upgrade DSM, access applications with independent login, index multimedia files for applications and more.

This chapter explains how to comprehend those management functions to make sure your Synology DiskStation is providing the best performance.

Check System Information

Go to **Main Menu** > **System Information** to check the following system information.



General

Under the **General** tab, you can see the basic information about your DiskStation, including serial number, model name, the amount of physical memory, DSM version, time information, thermal status, or external devices.

The DiskStation's thermal status is represented by green or orange lights:[1]

- **Green**: Thermal status is normal.
- **Orange**: DiskStation's thermal temperature is high. You need to cool down your DiskStation, or it will shut down to prevent system overheat.

[1] The information is available for specific models only.

The system's general information includes the following:

- **Basic Information**: You can see the detailed information about your Synology DiskStation here, including serial number, model name, memory size, DSM version, system time, operating time, and thermal status.
- **Time**: You can see the time setting of your Synology DiskStation here, including time server and time zone. To set up your time server, see "Set Up Time" on Page 23.
- **External Devices**: You can see the model name of your external eSATA or USB devices here.

Network

Under the **Network** tab, you can view the status of network configuration and network interfaces.

The network status includes the following:

- **Basic information**: See the basic information of your DiskStation's network configuration.
- **[Interface Name]**: See the detailed information of the network interface(s) currently configured on your DiskStation.

Storage

Under the **Storage** tab, you can check the free or used space of your DiskStation volumes and check the status of the hard disks.

To check volume usage:

From the pie charts, you can see the free or used space of DiskStation volumes.

Following are the possible status types of an internal hard disk:

- **Normal**: System partition and volume are available for use on the hard drive.
- **Initialized**: System partition is established, but no volume has been created.
- **Not Initialized**: System partition and volume are not established on the hard drive.
- **No Disk Installed**: No disk is installed in the corresponding hard drive slot.
- **System Partition Failed**: System partition on the hard drive is unavailable. We recommend that you replace the hard drive.
- **Crashed**: Failed to access volume on the hard drive. We recommend that you replace the hard drive.

Note: For the system to function normally, there should be at least one disk in **Normal** or **Initialized** status.

Log

Under the **Log** tab, you can view the log records of DiskStation services. Furthermore, after viewing the log records, you can delete or save them.

To see the log records of specific service:

Use the drop-down menu to view the System log, the Connection log, FTP file transfer log, File Station log, the WebDAV log, the Windows file service transfer log, the Backup log, the USB Copy/SD Copy log, and the Network Backup log.

Note:

- When the log size reaches its limit, the oldest record will be removed for space-saving consideration.
- SDCopy/USBCopy is available on specific models only.

To delete log records:

1. Select the log item you want to delete from the drop-down menu.
2. Click **Clear** to delete the log records.

To save log records:

1 Select the log item you want to save from the drop-down menu.

2 Click **Save**.

3 The log records will be extracted to an **.html** file. You can choose to open it or save it to a disk.

To refresh the log:

Click **Refresh** to reload the page and get the most updated log records.

Service

Under the **Service** tab, you can see the list of DSM services, which can be enabled or disabled by clicking **Enable** or **Disable** under the **Action** column. The checkmarks under the **Status** column indicate whether the services are enabled.

Current Connections

Under the **Current Connections** tab, you can manage the list of users who is currently accessing DiskStation resources.

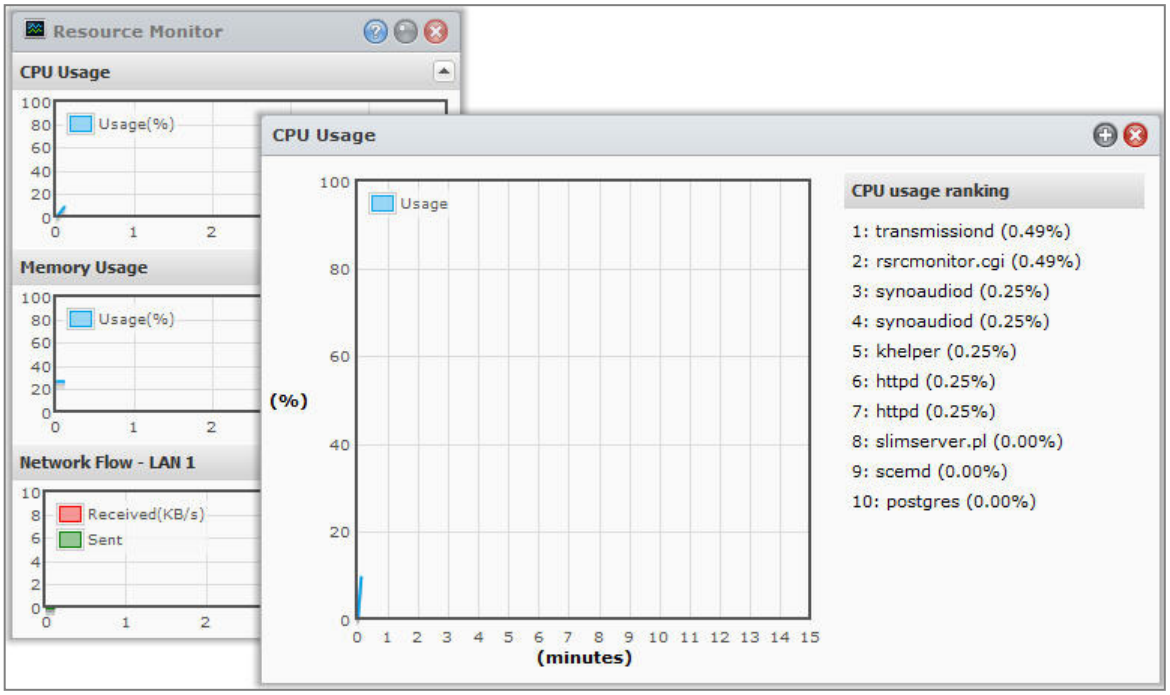
To manage current connections, do any of the following:

- Click **Save** to export the current list to an HTML file.
- Click **Refresh** to refresh the list.
- Click **Kill connection** to stop the user from accessing the resource. The disconnected user has to authorize again to gain access to the resource.
- Click **Disable user** to disable the user. To enable the user again, go to **Main Menu** > **Control Panel** > **User**.

Monitor System Resources

Go to **Main Menu** > **Resource Monitor** to monitor system resources.

When you launch **Resource Monitor**, it will start to collect and display data. The data will be deleted when you quit the application. Resource data collected in the past will not be preserved. A window would be opened to show detail resource usage information if any of the small resource usage windows is double-clicked.



The system resources include the following:

- **CPU Usage**: You can see the overall CPU usage as well as the CPU usage of each process in the order of decreasing CPU load. CPU load could be high when Resource Monitor is first launched, because the system needs to collect its resource data and load the UI page at the same time. Please note that keeping Resource Monitor launched will consume system resource.
- **Memory Usage**: Memory usage remains high because the system stores frequently accessed data in cache, so the data can be quickly obtained without accessing the hard drive. Cache memory will be released when overall memory is insufficient.
- **Network Flow**: The network flow chart displays the data sent and received rate in KB per second. If PPPoE is enabled, its transfer rate will also show up on the chart.

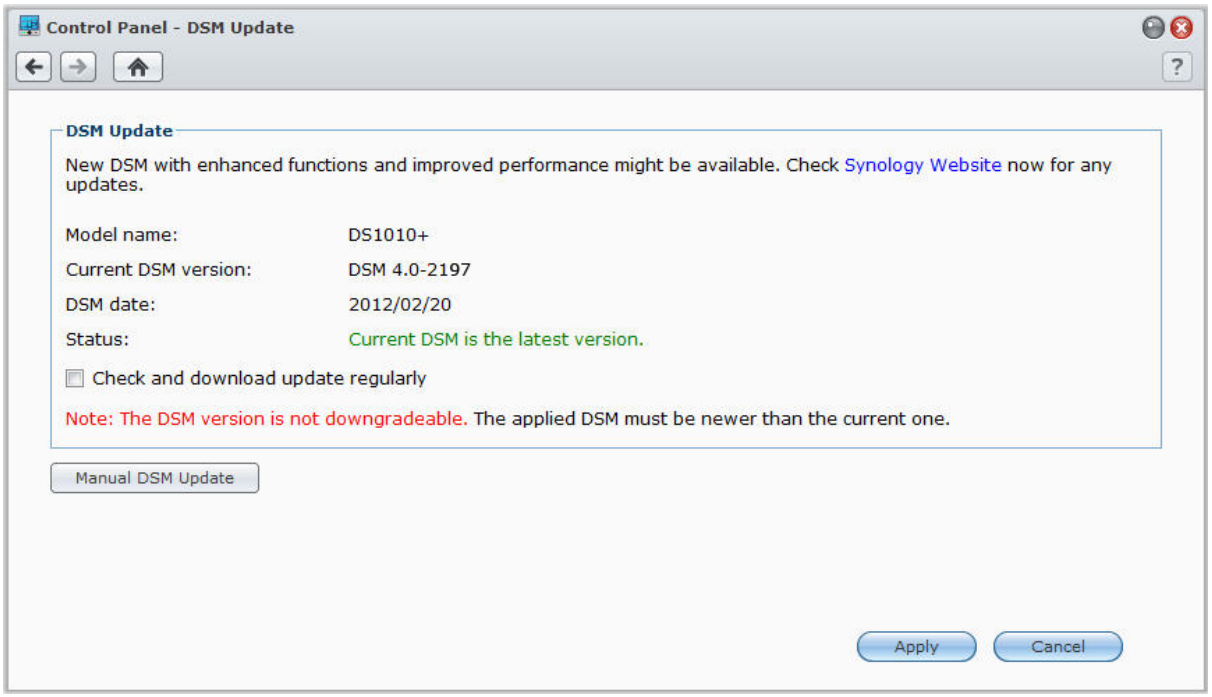
To see the details of any of the resources:

Click any of the resources to open a window that displays the details of resource usage.

Update DSM

Go to **Main Menu** > **Control Panel** > **DSM Update** to keep your Synology DiskStation up to date.

Important: The data saved on the Synology DiskStation will not be erased during the updating process. However, for security reason, we strongly recommend that you back up the data first.


Control Panel - DSM Update
DSM Update
New DSM with enhanced functions and improved performance might be available. Check Synology Website now for any updates.
Model name: DS1010+
Current DSM version: DSM 4.0-2197
DSM date: 2012/02/20
Status: Current DSM is the latest version.
Check and download update regularly
Note: The DSM version is not downgradeable. The applied DSM must be newer than the current one.
Manual DSM Update
Apply
Cancel

To check if the latest DSM is available for download:

When you go to this page, the system will check with Synology Website for any updates. The check results (shown in the **Status** field) might be any of the following:

- **Current DSM is the latest version.**
- **The latest [DSM_VERSION] is ready for download.**

To have the system download the latest DSM and perform the update:

1. If the latest DSM is ready for download, click the **Download** link to have the system download the latest DSM for you.
2. The system will display any of the following desktop notifications to tell you whether the download is successful or not: **DSM Download Completed** or **DSM Download Failed**.
3. Click the desktop notification window to go to **DSM Update**.
4. Do any of the following:
   - If DSM download completed, click **Update now** to start updating DSM immediately.
   - If DSM download failed, click **Retry** to have the system download the latest DSM from Synology again.

To check for updates regularly:

1. Tick **Check for update regularly**.
2. Click **OK**.

After you enable the function, the system will check for the latest DSM regularly, download it automatically, and then display desktop notification when DSM download completes.

Troubleshooting

If you see error messages (in red text) during checking or downloading the latest DSM, the following suggestions might help solve your problem:

- Check if the upgrading process was interrupted by users, or other unexpected events, such as a power failure.
- Check the DSM version. You can only update the system with a newer DSM version.
- Download the DSM update again because the update file might be corrupted.

If the problem remains, please contact Synology's **Technical Support**.

To perform manual DSM update:

1 Visit Synology's **Download Center** to download the latest .pat update file to your local computer. Unzip the file to get a **.pat** update file.

2 Click **Manual DSM Update** to enter Manual DSM Update Page.

3 Click **Browse** to select the update file.

4 Click **OK** to start to update your DSM. The system will reboot automatically when the update completes.

Troubleshooting

If you cannot update DSM, the following suggestions might help solve your problem:

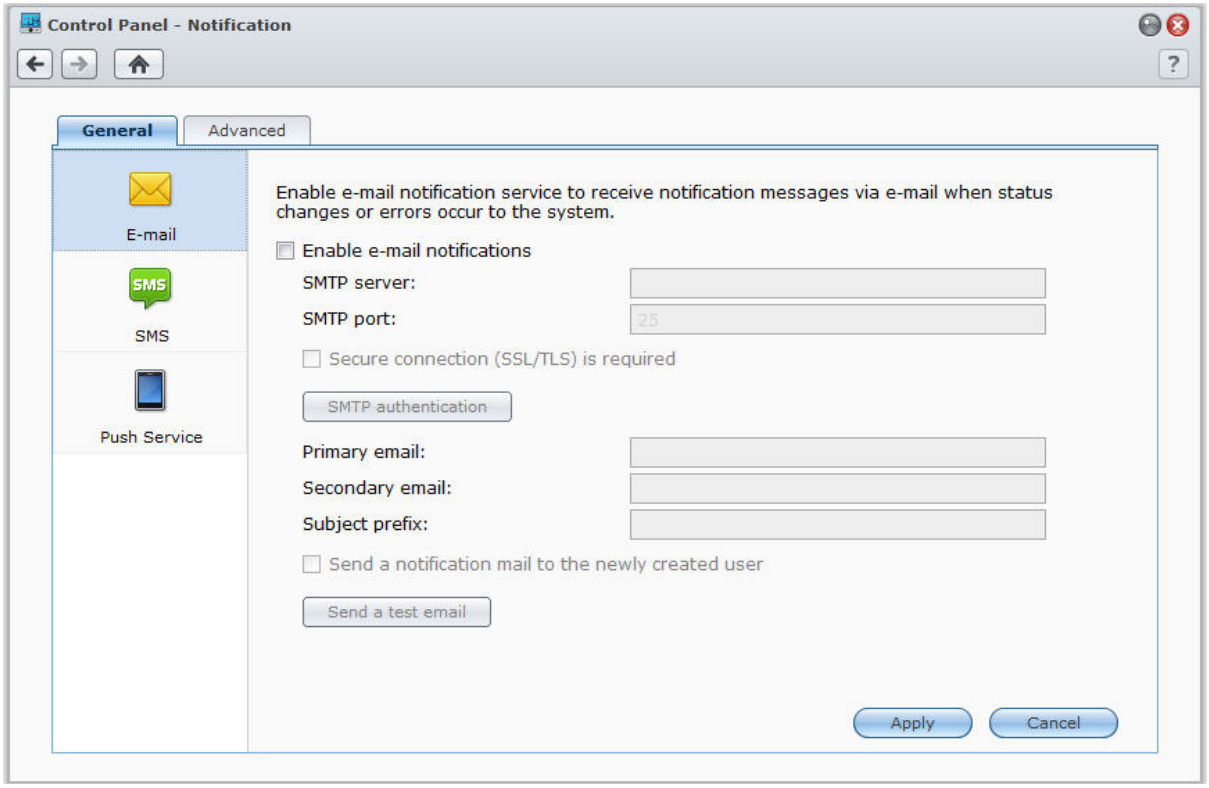
- Check if the upgrading process was interrupted by users, or other unexpected events, such as a power failure.
- Check the DSM version. You can only update the system with a newer DSM version.
- Download the DSM update again because the update file might be corrupted.

If the problem remains, please contact Synology's **Technical Support**.

Receive Event Notifications

Go to **Main Menu** > **Control Panel** > **Notification** and set up Synology DiskStation to notify you via e-mail, SMS, mobile devices, Windows Live Messenger, or Skype, when status changes or errors occur to the system, for example: connection loss, fan behavior change, power failure, storage volume running out of space, or back and restoration failure, etc.

For more information about how to select notification event types and edit notification messages, click the **Help** button (with a question mark) at the top-right corner, and then go to **Control Panel** > **System** > **Notification** > **Advanced**.



Manage E-mail Notification Service

Click the **E-mail** section to set up email notifications.

To enable E-mail notification:

Tick **Enable e-mail notifications** and complete the following settings:

1. Enter the SMTP server name or IP address.
2. By default, the SMTP port number is 25. Modify the number if you have specified a different SMTP port while setting up port forwarding rules.
3. If your SMTP server requires SSL/TLS connection, tick **Secure connection (SSL/TLS) is required**.
4. If your SMTP server requires SMTP authentication, click **SMTP authentication** and tick **Authentication required**, enter your username and password for the email server, and then click **Save**.
5. Enter the email address that will receive the notification mails in the **Primary email** or the **Secondary email** field.
6. Click **Send a test email** to see if your email settings are set up properly.
7. If you want to add a subject prefix in front of the notification mail subject, enter it in the **Subject prefix** field. The prefix helps you identify which DiskStation the notification mail was sent from.
8. If you want to send a notification mail to the newly created user, tick **Send a notification mail to the newly created user**, and the user will receive a mail when his/her account is created.
9. Click **Apply** to save the configuration, or click **Cancel** to cancel the setup.

More Information

About SMTP server's domain name:

The SMTP server can be an IP address or a domain name. If it is a domain name, please make sure a valid DNS server IP has been entered at **Main Menu** > **Control Panel** > **Network**, and make sure the server is on the Internet.

Manage SMS Notification Service

Click the **SMS** section to set up SMS notifications.

To enable SMS notification:

Tick **Enable SMS notifications** and complete the following settings:

1. Select a SMS provider from the **SMS service provider** drop down list. The default service provider is "clickatell".
2. Click **Add** to create a new SMS provider configuration or click **Delete** to delete the selected SMS provider configuration.
3. In the **Username** field, enter the username of your SMS service account.
4. In the **Password** and **Confirm password** field, enter and confirm the password of your SMS service account.
5. Enter your **Primary phone number** or **Secondary phone number**. If both numbers are entered, SMS notification messages will be sent to both numbers.
6. If you do not wish to receive too many messages, tick **Enable SMS interval limit** and limit the number of notification messages to one message per the time interval you specified.
7. Click **Send a test SMS message** to send a test SMS message to the phone number you specified. If no message is received, it means the configuration is incorrect.
8. Click **Apply** to save the configuration, or click **Cancel** to cancel the setup.

Note:

- Username: case sensitive and must be between 1 and 32 Unicode characters.
- Password: case sensitive and must be between 0 and 24 displayable characters, including letters, numbers, signs, and space.
- The SMS interval limit must be between 1 and 10000 minutes.
- Fees might apply to send SMS messages. Contact your local SMS service provider for more information.

To create a SMS provider configuration:

1. Click **Add**.
2. In the **Provider name** field, enter the name of your SMS service provider.
3. In **SMS URL** field, enter a SMS URL with the message content set to "Hello world." You can obtain the SMS URL from your SMS service provider.
4. Click **Next**.
5. The system will break down the SMS URL into several parameters. Define each parameter by selecting the corresponding category. Each parameter category can be used only once except **Other**.

Note: **Provider name** is case sensitive and must be between 1 and 32 Unicode characters.

More Information

SMS URL: case sensitive and must be between 1 and 500 Unicode characters. The number of parameters must be between 4 and 10. This SMS URL is only for setup purposes. No SMS message will be sent after setup is completed. The format of this URL is provided by the SMS service provider, and the URL must include the following parameters: username, password, destination phone, and message content.

Using Clickatell as an example, a sample URL would be the following (reference only):
https://api.clickatell.com/http/sendmsg?user=TestUser&password=TestPassword&api_id=3148203&to=886123456789&text=Hello+world

Please note that in "message content" parameter, the space between "Hello" and "world" will be replaced by the particular character defined by the service provider.

Manage Mobile Devices and Instant Messaging Notifications

Click the **Push Service** section to set up mobile device and instant messaging notifications.

To enable mobile device notifications:

1 Tick **Enable mobile device notifications**, and then click **Apply**.

2 Install and launch **DS finder** on your mobile device, and then add your DiskStation to the **Favorite** list to pair your mobile with the DiskStation. For more information, refer to its Help file.

Note: Push service is currently supported by **DS finder** for iPhone/iPad only.

3 Click **Send a test message** and then click **OK** to send a test notification. Now you can launch DS finder on your mobile device to check whether the test message is received.

To manage paired mobile devices:

1 Click **Manage paired devices** to see the list of all paired mobile devices.

2 If you want to unpair any of the devices, select them and click **Unpair**. (Press and hold Shift or Ctrl while making multiple selections.) No notification will be sent to them unless you pair them up again.

To enable instant messaging notifications:

1 Tick **Enable Windows Live Messenger notifications** and/or **Enable Skype notifications**, and then click **Apply**.

2 Enter one or more instant messaging accounts in the **Windows Live Messenger account** and/or the **Skype account** field.

Note: For each instant messaging program, the maximum number of accounts is 2. You must separate them with ';'.

3 Log in to your instant messaging program to accept friend invitation from Synology's push service.

4 Click **Send a test message** and then click **OK** to send a test notification. Now you can launch your instant messaging program to check whether the test message is received.

Access Applications with Independent Login

Go to **Main Menu** > **Control Panel** > **Application Portal** to configure connection settings of applications, which allows you to run the applications in an independent browser window without logging in to DSM. These connection settings include customizing portal aliases, HTTP and HTTPS ports.

Note: Applications whose connection settings can be configured via Application Portal are: Audio Station, Download Station, Surveillance Station, File Station.

Customized Alias

Applications can be opened in an independent browser window at **[http(s)://DSM server address:DSM server port number [HTTP(S)]/alias name/]**once the portal alias is set up.

To enable a customized alias:

1 Select an application, and click **Edit** or double-click the selected application.

2 In the window that appears, tick **Enable customized alias**, specify a customized alias, and click **OK**.

3 Click **Save** on the main page. The application can be accessed via the customized portal alias.

To redirect from [http(s)://DSM server address/alias name/]:

1 Tick **Redirect from** and click **OK**.

2 Click **Save** on the main page.

It spares you the trouble of memorizing the port number for each application, and allows you to type in your easy-to-remember customized alias (when enabled) at the address bar.

To disable a customized alias:

1 Select an application, and click **Edit** or double-click the selected application.

2 In the window that appears, uncheck **Enable customized alias**, and click **OK**.

3 Click **Save** on the main page. The customized alias of the application is disabled.

Note:

- Following are the respective default aliases of the four applications, Audio Station, Download Station, Surveillance Station, File Station: **audio**, **download**, **cam**, **file**.
- Alias names cannot be the same as those reserved for system, browsers, or used by other applications, and their number of characters must be limited within 2 to 20.
- Alias names can consist of mixed case letters, numeric characters, and two special characters (-), (_), but these two characters can only be used for the other characters except the first and last ones.

Customized HTTP(S) Ports

Applications can be opened in an independent browser window at **[http(s)://DSM server address:customized port number]**once the HTTP(S) port is set up.

To enable a customized port [HTTP(S)]:

1 Select an application, and click **Edit** or double-click the selected application.

2 In the window that appears, tick **Enable customized port [HTTP(S)]**, specify a customized port number, and click **OK**.

3 Click **Save** on the main page. The application can be accessed via the customized HTTP(S) port.

To disable a customized port [HTTP(S)]:

1 Select an application, and click **Edit** or double-click the selected application.

2 In the window that appears, uncheck **Enable customized port [HTTP(S)]**, and click **OK**.

3 Click **Save** on the main page. The customized HTTP(S) port of the application is disabled.

- ***Note:*** The range of port number can be from 1 to 65535, but the following ports should be excluded because they are reserved for system use: 20, 21, 22, 23, 25, 80, 110, 137, 138, 139, 143, 199, 443, 445, 515, 543, 548, 587, 873, 993, 995, 3306, 3689, 5000, 5001, 5005, 5006, 5335, 5432, 6881, 8080, 7000, 7001, 8081, 9997, 9998, 9999, 50001, 50002, eMule default ports: 4662 (TCP), 4672(UDP), and FTP default port range: the actual range may vary depending on different models.

Index Multimedia Files for Applications

Go to **Main Menu** > **Control Panel** > **Media Indexing Service** to have Media Indexing Service automatically scan multimedia files, such as photos, music, and videos stored on your DiskStation, and compile them into the media library to be indexed by multimedia applications: Media Server, Audio Station, Photo Station, and iTunes Server.

Re-index Media Files

Multimedia data within the installed applications can be scanned and re-indexed for the following applications.

To re-index media files:

Click **Re-index** to re-construct the index structure of all media files in the indexed folders, both default folders and the ones created by yourselves. The process will be executed in the background.

Reset admin's Password

If you forgot the password for **admin** and are therefore unable to log in to DSM, you can reset the password to blank and set a new password.

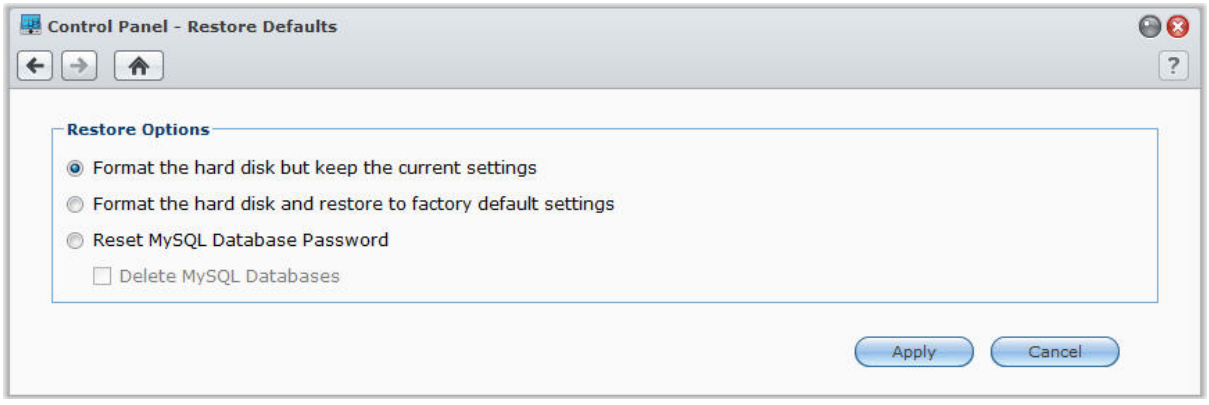
To reset admin's password:

Press and hold the **RESET** button on the back panel of your Synology DiskStation for 4 seconds until you heard a beep sound.

> ***Note:*** Other than resetting administrator's password, using the **RESET** button will also restore Synology DiskStation's IP and DNS to the default value.

Restore Synology DiskStation to Factory Defaults

Go to **Main Menu** > **Control Panel** > **Restore Defaults** if you want to restore your Synology DiskStation to factory defaults.


Control Panel - Restore Defaults
Restore Options
Format the hard disk but keep the current settings
Format the hard disk and restore to factory default settings
Reset MySQL Database Password
Delete MySQL Databases
Apply
Cancel

There are three restore options:

- **Format the hard disk but keep the current settings:** All user data in the hard drive will be deleted; whereas the system configurations will remain.
- **Format the hard disk and restore to factory default settings:** All user data in the hard drive will be deleted and the entire system will be restored to default.
- **Reset MySQL Database Password:** The password of the MySQL database will be reset.

  If you wish to delete your MySQL databases, check the **Delete MySQL Databases** checkbox and click **Apply**.

Reinstall Synology DiskStation

If you want to reinstall your Synology DiskStation without losing its data, you can use the **RESET** button on the back panel.

To reinstall Synology DiskStation:

1 Press and hold the **RESET** button for about 4 seconds until the Synology DiskStation emits a beep sound.

2 Within the next 10 seconds, press and hold **RESET** button for about 4 seconds until the Synology DiskStation emits a beep sound.

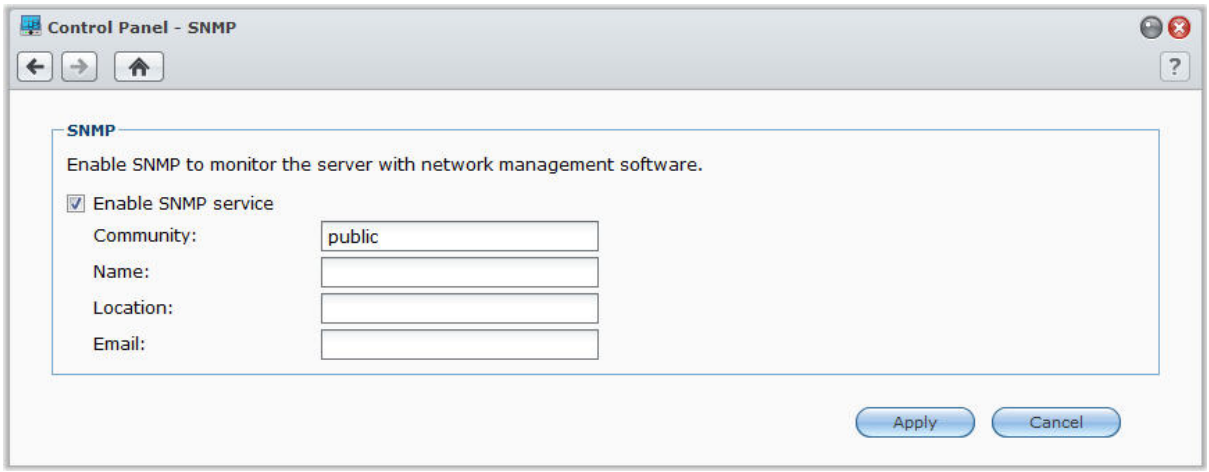
3 Run Synology Assistant and follow the installation instructions in the **Quick Installation Guide** that came with your installation disc to set up the Synology DiskStation.

Important: The data saved on the Synology DiskStation will not be erased during the reinstallation. However, for security reason, we strongly recommend that you back up the data first.

Enable SNMP Service

Go to **Main Menu** > **Control Panel** > **SNMP** to enable SNMP service, which allows users to monitor Synology DiskStation network flow with the network management software.

Currently, **SNMPv1** and **SNMPv2c** protocols are supported.



To enable SNMP service:

1 Tick **Enable SNMP service**

2 Enter a **Community** name.

3 Enter the optional information to help you identify your Synology DiskStation: **Name**, **Location**, and **Email**.

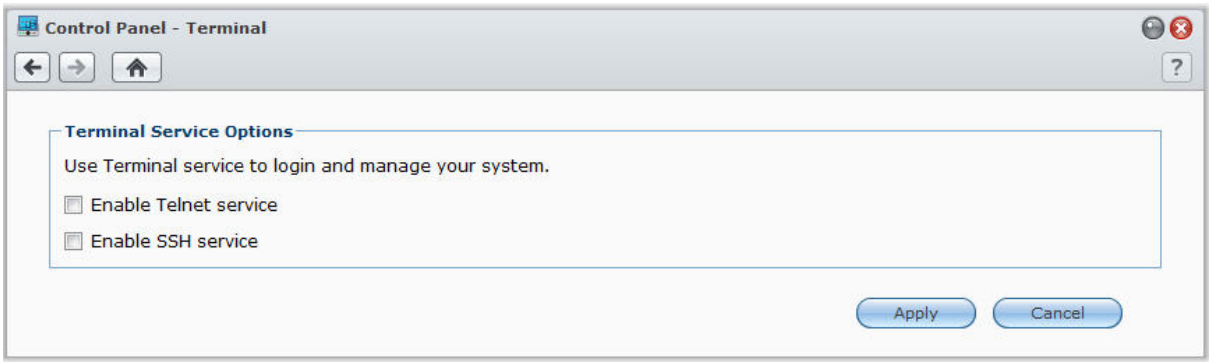
4 Click **Apply**.

To disable the SNMP service:

Uncheck **Enable SNMP service**, and click **Apply**.

Enable Terminal Services

Go to **Main Menu** > **Control Panel** > **Terminal** to enable Terminal service, allowing you to use Telnet or SSH to log in to Synology DiskStation and modify its settings.



To enable connection to Synology DiskStation via Telnet or SSH:

1 Do any of the following:

- **If you want to enable the Telnet service,** tick **Enable Telnet service**.
- **If you want to enable the SSH service,** tick **Enable SSH service**.

> ***Note:*** When you disable the SSH service, all SSH tasks will be terminated immediately. If you disable the SSH service while performing a backup task, perform the task again after the SSH service is disabled.

2 Click **Apply**.

> ***Important:*** Use the Terminal service with caution. Improper manipulation or modification to Synology DiskStation may result in system malfunction or data loss.

Chapter 18

Communicate with Mobile Devices

As Internet access grows popular on mobile devices, Synology provides you with several creative alternatives to communicate with your Synology DiskStation using iOS/Android or other mobile devices.

Manage DSM Settings with DSM mobile

DSM mobile allows DSM **admin** (or a user belonging to the **administrators** group) to manage DSM settings and check DSM information with the web browser of an iOS (iPhone, iPad or iPod touch) or Android device.

To log in to DSM mobile:

1 Use the web browser of your iOS or Android device to connect to **http://Synology_Server_IP:5000**.

2 Enter your DSM user credentials and tap **Login**.

> ***Note:*** For more information about DSM mobile, tap **Help** on the home page.

Use iOS and Android Apps

The Synology mobile apps are now available on Apple's App Store or Android Market, allowing you to communicate with Synology DiskStation wherever Wi-Fi access is available. You can manage your DiskStation files, music, photo and video albums, and even the surveillance videos on the go.

DS audio

DS audio allows you to access Audio Station with an iOS or Android device and listen to your favorite music on the go. Besides, the remote controller feature allows you to control Audio Station's music playback when there is an audio output device connected to the USB port of your DiskStation, such as a USB speaker, or an external speakers or home stereo equipment connected to the audio dock of Synology Remote (sold separately).

DS cam

DS cam allows users who own an iOS or Android device to live view their IP cameras, take snapshots, and view recorded events from your Surveillance Station whenever a network connection is available.

DS photo+

DS photo+ allows you to access Photo Station with an iOS or Android device and share your precious moments on the go. Download and save photos from Photo Station to your mobile device so you can enjoy the flashbacks anytime anywhere. You can also use DS photo+ to upload snapshots or videos from your camera phone straight to Photo Station. Besides, you and your friends can interact by leaving comments on any photos, adding more fun to your photo sharing experiences.

DS file

DS file allows you to access and manage DiskStation files with iOS or Android devices.

DS finder

DS finder allows you to monitor or email the status of your DiskStation, and request it to perform wake on LAN (WOL), restart, shut down, or play beep sounds (to help you quickly find the its location) with an iOS or Android device.

> ***Note:*** For more information about those mobile Apps, refer to the Help files that come with the Apps.

Use Other Mobile Devices

If you have a mobile device running on Windows Mobile 6.0 (with Internet Explorer Mobile or Opera 9.0 or later), Symbian OS 9.1 (with S60 3rd Edition or later), or iPhone OS 2.3.1 or later, you can use the device to log in to Synology DiskStation to view photos with Mobile Photo Station and read supported file formats with Mobile File Station around the world where Internet access is available.

Troubleshooting

For any questions about managing your DSM, go to **Main Menu** > **DSM Help** or click the **Help** button (with a question mark) at the top-right corner of every window. For any questions other than that, please visit Synology Inc. website **www.synology.com** for further assistance.

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2.1 Limited Warranty. Subject to Section 2.7, Synology warrants to Customer that each Product (a) will be free of material defects in workmanship and (b) under normal use will perform substantially in accordance with Synology's published specifications for the Product during the Warranty Period. Synology warrants the Software as set forth in the accompanying end user license agreement provided with the Product, if any.

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2.7 Exclusions. The foregoing warranties and warranty obligations do not apply to any Product that (a) has been installed or used in a manner not specified or described in the Product specifications; (b) has been repaired, modified or altered by anyone other than Synology or its agent or designee; (c) has been in any way misused, abused, or damaged; (d) has been used with items not provided by

Synology other than the hardware or software for which the Product is designed; or (e) otherwise fails to conform to the Product specifications and such failure is attributable to causes not within or under Synology's control. Further, the foregoing warranties will be void if (1) Customer disassembles the Product except as authorized by Synology; (2) Customer fails to implement any correction, modification, enhancement, improvement or other update made available to Customer by Synology; or (3) Customer implements, installs or uses any correction, modification, enhancement, improvement or other update made available by any third party. The warranty set forth in Section 2.1 will terminate upon Customer's sale or transfer of the Product to a third party.

2.8 Disclaimer of Warranties. THE WARRANTIES, OBLIGATIONS, AND LIABILITIES OF SYNOLOGY AND THE REMEDIES OF CUSTOMER SET FORTH IN THIS WARRANTY ARE EXCLUSIVE AND IN SUBSTITUTION FOR, AND CUSTOMER HEREBY WAIVES, RELEASES AND DISCLAIMS, ALL OTHER WARRANTIES, OBLIGATIONS AND LIABILITIES OF SYNOLOGY AND ALL OTHER RIGHTS, CLAIMS AND REMEDIES OF CUSTOMER AGAINST SYNOLOGY, EXPRESS OR IMPLIED, ARISING BY LAW OR OTHERWISE, WITH RESPECT TO THE PRODUCT, ACCOMPANYING DOCUMENTATION OR SOFTWARE AND ANY OTHER GOODS OR SERVICES DELIVERED UNDER THIS WARRANTY, INCLUDING, BUT NOT LIMITED TO ANY: (A) IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE; (B) IMPLIED WARRANTY ARISING FROM COURSE OF PERFORMANCE, COURSE OF DEALING, OR USAGE OF TRADE; (C) CLAIM OF INFRINGEMENT OR MISAPPROPRIATION; OR (D) CLAIM IN TORT (WHETHER BASED ON NEGLIGENCE, STRICT LIABILITY, PRODUCT LIABILITY OR OTHER THEORY). SYNOLOGY MAKES NO GUARANTEE AND SPECIFICALLY DISCLAIMS ANY WARRANTY THAT THE DATA OR INFORMATION STORED ON ANY SYNOLOGY PRODUCT WILL BE SECURE AND WITHOUT RISK OF DATA LOSS. SYNOLOGY RECOMMENDS THAT CUSTOMER TAKES APPROPRIATE MEASURES TO BACK UP THE DATA STORED ON THE PRODUCT. SOME STATES DO NOT ALLOW LIMITATIONS ON IMPLIED WARRANTIES, SO THE ABOVE LIMITATION MAY NOT APPLY TO CUSTOMER.

Section 3. Limitations of Liability

3.1 Force Majeure. Synology will not be liable for, or be considered to be in breach of or default under this Warranty on account of, any delay or failure to perform as required by this Warranty as a result of any cause or condition beyond its reasonable control (including, without limitation, any act or failure to act by Customer).

3.2 Disclaimer of Certain Damages. IN NO EVENT WILL SYNOLOGY OR ITS SUPPLIERS BE LIABLE FOR THE COST OF COVER OR FOR ANY INCIDENTAL, INDIRECT, SPECIAL, PUNITIVE, CONSEQUENTIAL OR SIMILAR DAMAGES OR LIABILITIES WHATSOEVER (INCLUDING, BUT NOT LIMITED TO LOSS OF DATA, INFORMATION, REVENUE, PROFIT OR BUSINESS) ARISING OUT OF OR RELATING TO THE USE OR INABILITY TO USE THE PRODUCT, ANY ACCOMPANYING DOCUMENTATION OR SOFTWARE AND ANY OTHER GOODS OR SERVICES PROVIDED UNDER THIS WARRANTY, WHETHER BASED ON CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY OR OTHER THEORY EVEN IF SYNOLOGY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

3.3 Limitation of Liability. SYNOLOGY'S AND ITS SUPPLIERS' LIABILITY ARISING OUT OF OR RELATING TO THE USE OR INABILITY TO USE THE PRODUCT, ANY ACCOMPANYING DOCUMENTATION OR SOFTWARE AND ANY OTHER GOODS OR SERVICES PROVIDED UNDER THIS WARRANTY IS LIMITED TO THE AMOUNT ACTUALLY PAID BY CUSTOMER FOR THE PRODUCT REGARDLESS OF THE AMOUNT OF DAMAGES CUSTOMER MAY INCUR AND WHETHER BASED ON CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY OR OTHER THEORY. The foregoing disclaimer of certain damages and limitation of liability will apply to the maximum extent permitted by applicable law. The laws of some states/jurisdictions do not allow exclusion or limitation of certain damages. To the extent that those laws apply to the Product, the exclusions and limitations set forth above may not apply to Customer.

Section 4. Miscellaneous

4.1 Proprietary Rights. The Product and any accompanying Software and documentation provided with the Product include proprietary and intellectual property rights of Synology and its third party suppliers and licensors. Synology retains and reserves all right, title, and interest in the intellectual property rights of the Product, and no title to or ownership of any intellectual property rights in or to the Product, any accompanying Software or documentation and any other goods provided under this Warranty is transferred to Customer under this Warranty. Customer will (a) comply with the terms and conditions of the Synology end user license agreement accompanying any Software furnished by Synology or an authorized Synology distributor or reseller; and (b) not attempt to reverse engineer any Product or component thereof or accompanying Software or otherwise misappropriate, circumvent or violate any of Synology's intellectual property rights.

4.2 Assignment. Customer will not assign any of its rights under this Warranty directly, by operation of law or otherwise, without the prior written consent of Synology.

4.3 No Additional Terms. Except as expressly permitted by this Warranty, neither party will be bound by, and each party specifically objects to, any term, condition or other provision that conflicts with the provisions of this Warranty that is made by the other party in any purchase order, receipt, acceptance, confirmation, correspondence or otherwise, unless each party specifically agrees to such provision in writing. Further, if this Warranty conflicts with any terms or conditions of any other agreement entered into by the parties with respect to the Product, this Warranty will prevail unless the other agreement specifically references the sections of this Warranty that it supersedes.

4.4 Applicable Law. Unless expressly prohibited by local law, this Warranty is governed by the laws of the State of Washington, U.S.A. without regard to any conflict of law principles to the contrary. The 1980 U.N. Convention on Contracts for the International Sale of Goods or any successor thereto does not apply.

4.5 Dispute Resolution. Any dispute, controversy or claim arising out of or relating to this Warranty, the Product or services provided by Synology with respect to the Product or the relationship between Customers residing within the United States and Synology will be resolved exclusively and finally by arbitration under the current commercial rules of the American Arbitration Association, except as otherwise provided below. The arbitration will be conducted before a single arbitrator, and will be limited solely to the dispute between Customer and Synology. The arbitration, or any portion of it, will not be consolidated with any other arbitration and will not be conducted on a class-wide or class action basis. The arbitration shall be held in King County, Washington, U.S.A. by submission of documents, by telephone, online or in person as determined by the arbitrator at the request of the parties. The prevailing party in any arbitration or legal action occurring within the United States or otherwise shall receive all costs and reasonable

attorneys' fees, including any arbitration fee paid by the prevailing party. Any decision rendered in such arbitration proceedings will be final and binding on the parties, and judgment may be entered thereon in any court of competent jurisdiction. Customer understands that, in the absence of this provision, Customer would have had a right to litigate any such dispute, controversy or claim in a court, including the right to litigate claims on a class-wide or class-action basis, and Customer expressly and knowingly waives those rights and agrees to resolve any disputes through binding arbitration in accordance with the provisions of this Section 4.5. For Customers not residing within the United States, any dispute, controversy or claim described in this section shall be finally resolved by arbitration conducted by three neutral arbitrators in accordance with the procedures of the R.O.C. Arbitration Law and related enforcement rules. The arbitration shall take place in Taipei, Taiwan, R.O.C., and the arbitration proceedings shall be conducted in English or, if both parties so agree, in Mandarin Chinese. The arbitration award shall be final and binding on the parties and may be enforced in any court having jurisdiction. Nothing in this Section shall be deemed to prohibit or restrict Synology from seeking injunctive relief or seeking such other rights and remedies as it may have at law or equity for any actual or threatened breach of any provision of this Warranty relating to Synology's intellectual property rights.

4.6 Attorneys' Fees. In any arbitration, mediation, or other legal action or proceeding to enforce rights or remedies under this Warranty, the prevailing party will be entitled to recover, in addition to any other relief to which it may be entitled, costs and reasonable attorneys' fees.

4.7 Export Restrictions. You acknowledge that the Product may be subject to U.S. export restrictions. You will comply with all applicable laws and regulations that apply to the Product, including without limitation the U.S. Export Administration Regulations.

4.8 Severability. If any provision of this Warranty is held by a court of competent jurisdiction to be invalid, illegal, or unenforceable, the remainder of this Warranty will remain in full force and effect.

4.9 Entire Agreement. This Warranty constitutes the entire agreement, and supersedes any and all prior agreements, between Synology and Customer related to the subject matter hereof. No amendment, modification or waiver of any of the provisions of this Warranty will be valid unless set forth in a written instrument signed by the party to be bound thereby.